EAST

EAST.FINANCE 2.0

WHITE PAPER

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Contents

Stablecoin Status Quo in 2023

The role of the stablecoin in the crypto markets has and will continue to evolve, as adoption of crypto increases forcing a more prominent role of stablecoins across the larger financial ecosystem.
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PwC Global CBDC Index and Stablecoin Overview 2022

2022 was the most challenging year yet in the history of the stablecoin market. By January, the total market capitalization had grown by over 3,000% in just two years. This trend continued until May, when UST, the algorithmic stablecoin of the Terra network, crashed.

At the time, UST was the third-largest stablecoin, behind USDT and USDC. It's no surprise that this shock tested the whole market. New York judges ordered Tether to provide documents for USDT backing. Binance suspended spot, future and margin trading with USDC, USDP and TUSD, then launched its auto conversion to BUSD, Binance own stablecoin. In California, a new bill prohibited entities from trading in stablecoins that aren't licensed either by a bank and fully backed by secure reserves or licensed by the California Department of Financial Protection and Innovation. All these measures were just the tip of the iceberg.

The good news is that hard times grow awareness. "Stablecoin" is no longer a magic word. Each and every stablecoin should be put under the microscope before providing investment recommendations. In general, there are three types of stablecoins available today. The key difference is how their collateral is ensured.

01
Algorithmic stablecoins rely on fine-tuned mathematical models. Their stability depends on project governance tokens. Their backing is quite volatile, may be both exo- and endogenous. In 2022, it was algorithmic stablecoins that undermined the trust of the whole market; it's enough to recall just UST and USDN.

02
Fiat-based stablecoins raise doubt vis-a-vis their DeFi nature. They are backed by fiat reserve currencies, and prove their stability accordingly. Fiat stablecoins require centralized, trusted off-chain partners, such as banks, audit and implicit sponsor firms. This increases centralization and the associated risks: single point of failure, extra regulations, or even blacklisting. Today's top fiat-based stablecoins are USDT and USDC.

03
Collateral stablecoins are backed by crypto and protected by overcollateralization. They offer reliability and flexibility, as they can be redeemed for collateral at any time, while still being decentralized. The collateral debt model has proved itself in a number of stablecoins; the most famous of these is DAI. Now the new EAST stablecoin is joining the party. Its mechanics are most similar to this model, though there are some differences we'll describe further.

The SafeFi Concept and EAST.Finance

Previously, we made some fresh examples of traditional DeFi security and reliability. What's great about this is that the DeFi industry had analyzed errors and introduced a new, antifragile concept called SafeFi. SafeFi offers new basic principles as solutions for traditional DeFi problems such as opaque, shady profit models; insecurity; inaccessibility of collaterals. These basic principles — *Safety, Availability, and Predictability* — are implemented as EAST.Finance key features.

Safety

Availability

Predictability
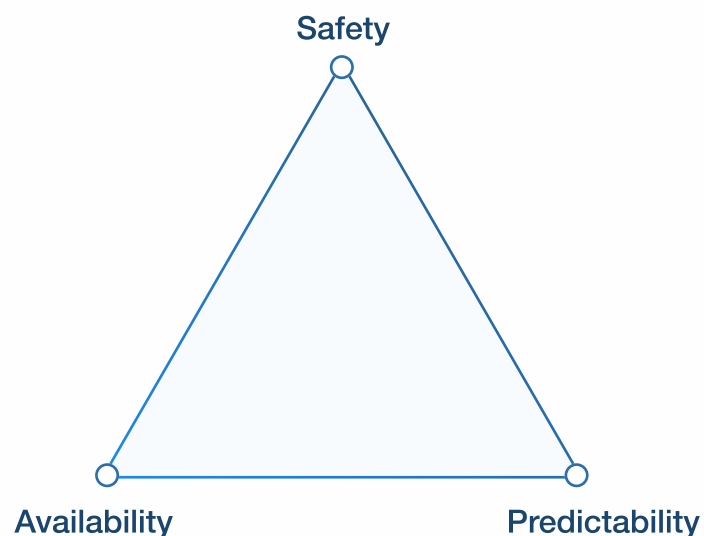
01
Overcollateralization with liquid assets. EAST is backed according to the collateral debt model described above. Surpassing a 100% collateral rate is a rule of thumb, the algorithms are transparent and reliable.

02
Partial liquidation. Users can liquidate up to 50% of any vault with an insufficient backing ratio. As a result, the protocol liquidity won't become stuck in "whale" positions; at the same time, vault owners won't lose all their collateral in a momentary recession.

03
Native staking. You can earn with your EAST through its native staking. The protocol then will stake your collaterals and provide you a stable APR – paying you in EAST, rather than in some sort of shady token.

EAST.Finance Features

Let's put this all together. EAST.Finance is a cross-chain overcollateralized DeFi protocol built on SafeFi principles. The protocol token, EAST (Enterprise Algorithmic Stable Token), is an overcollateralized stablecoin backed by various crypto assets. Later, EAST will be repositioned as a hybrid stablecoin, available for backing with both crypto and real-world assets (RWA).

Cross-chain by design*
EAST.Finance is a cross-chain protocol by design. This means that EAST components in different blockchains are independent and functionable on their own merit.

Trustworthy economic model
Overcollateralization with liquid assets is the key principle of EAST.Finance; its model is similar to other reliable stablecoins, such as DAI.

Various collaterals
In the current version, EAST.Finance supports WEST, WAVES and ETH. Protocol architecture enables the easy addition of new collateral options.

Incentive program
You regularly receive ORIENT incentive tokens for keeping your EAST positions active. Then you can stake ORIENT just like you stake EAST

Real-time withdrawal
You can release your WEST, WAVES and ETH from your EAST vault in no time, whenever you need.

Reliable PoS staking
You can stake your EAST and ORIENT the most reliable way — at PoS (Proof-of-Stake) basis.

* Here and below features marked with asterisk (*) are planned for later EAST releases

EAST.Finance Protocol Infrastructure

EAST architecture is based on Waves and Waves Enterprise* blockchains, together with a number of off-chain services.
By design, our architecture includes all the necessary SafeFi mechanisms.

We plan, eventually, to add other reliable blockchains. In this section, we'll cover the mechanics in both current blockchains, step-by-step.
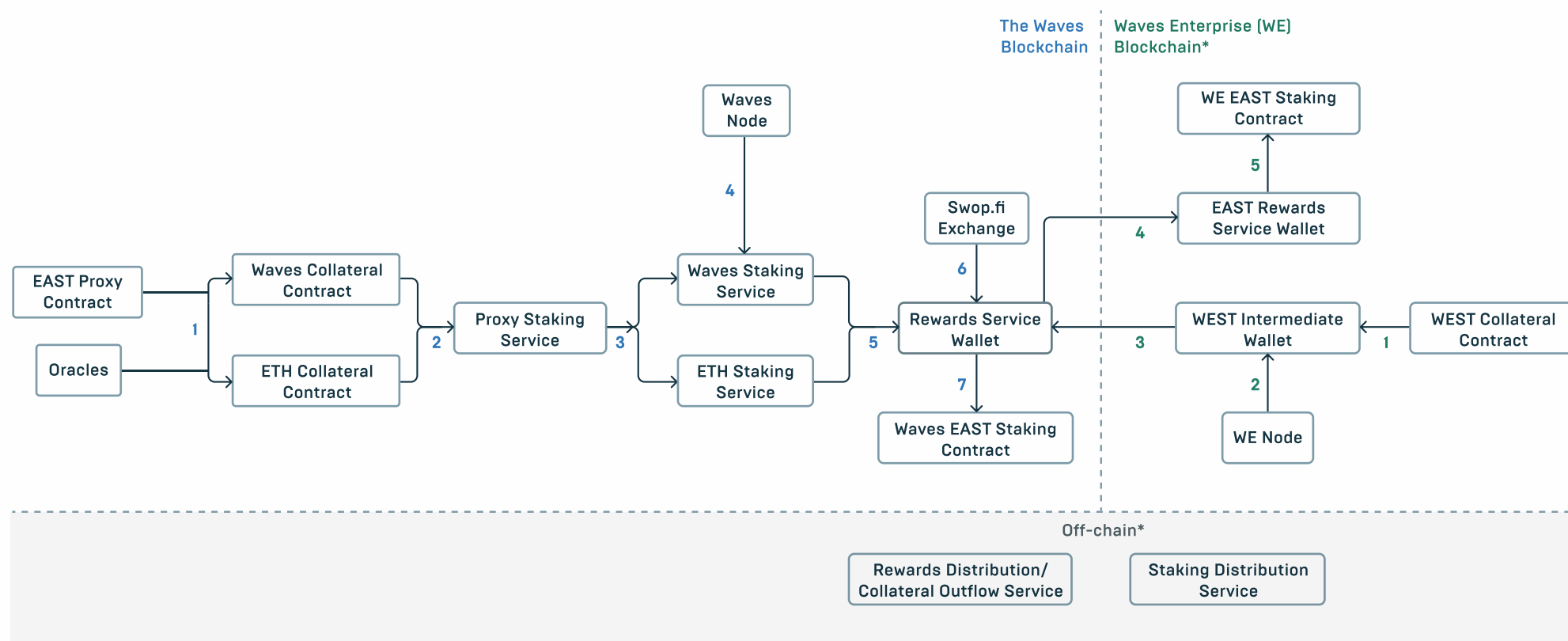
Waves blockchain

1. EAST proxy contract routes user transactions to certain EAST collateral contracts, depending on what collateral the user has chosen. At the moment, there are two collateral contracts available in the Waves blockchain, for WAVES and ETH. EAST proxy contract is the only EAST issuer in the Waves blockchain; the contract also manages users' positions, liquidates and closes vaults.
2. The collateral contracts create EAST vaults and call the proxy staking contract.
3. Just like the initial EAST proxy contract, the Proxy staking service routes collateral to asset staking contracts. Also, it sends back the users' collaterals after closing their vaults. Finally, it launches the off-chain Rewards distribution/collateral outflow service; this will be described later in the current section.
4. The Waves staking service starts when a user stakes EAST. In return, the user gets stEAST tokens. The stEAST price increases every time, the Waves EAST staking contract gets staking rewards (see steps 6–7). In more detail this is described in the EAST Staking section below. In future releases, we will add similar options for ETH and other assets.
5. The rewards from WAVES staking are transferred to the Rewards service wallet.
6. Collateral in the Rewards service wallet is exchanged for EAST at Swop.fi.
7. The EAST is transferred to the EAST staking contract as a reward for EAST stakers.

Waves Enterprise blockchain*

1. Since, to date, WEST is the only collateral available in the Waves Enterprise network; we need no proxy contract here. WEST collateral contract has similar functions to the collateral contracts in the Waves blockchain.
2. The WEST intermediate wallet provides WEST leasing at a Waves Enterprise node and accumulates leasing rewards.
3. The WEST intermediate wallet sends WEST rewards to the Rewards service wallet in the Waves blockchain.
4. The Rewards service wallet exchanges rewards from WEST leasing for EAST at Swop.fi and sends it back to the EAST rewards service wallet in the Waves Enterprise blockchain.
5. The EAST rewards service wallet transfers EAST staking rewards to the EAST staking contract in the Waves Enterprise network.

Off-chain services*

Last but not the least are off-chain services, which manage all the protocol wallets. At EAST.Finance, there are two main off-chain services, which are responsible for all the protocol's wallets described above:
- The Rewards distribution/collateral outflow service — manages the EAST rewards service wallet and the WEST intermediate wallet, exchanges WEST for EAST at Swop.fi.
- The Staking distribution service — manages the Rewards service wallet and synchronizes staking APR in Waves and Waves Enterprise networks.

Collateralization. Liquidation. Stability Fee

In this section, we'll clarify the core mechanisms of SafeFi tokenomics in EAST.Finance implementation; these mechanics may not be obvious, but are nevertheless critical.

Collateralization

Any collateral in EAST.Finance has its own backing ratio **(BR)**, which determines the extra sum of collateral you need to issue EAST. Whether you provide WAVES, WEST or ETH, you need a different value for the same sum of EAST. The backing ratios are updated by oracles.

Liquidation

If a vault's backing rate drops down to the liquidation ratio **(LR)**, it becomes subject to user liquidation. This level depends on what asset is backing the vault; with more volatile assets, a higher LR is set. Default backing and liquidation ratios are shown below.

Asset	ETH	WAVES	WEST	USDT*
BR	150%	200%	250%	100%
LR	110%	130%	150%	—

* — USDT backing is not available by default, but can be used for a certain time to support EAST peg
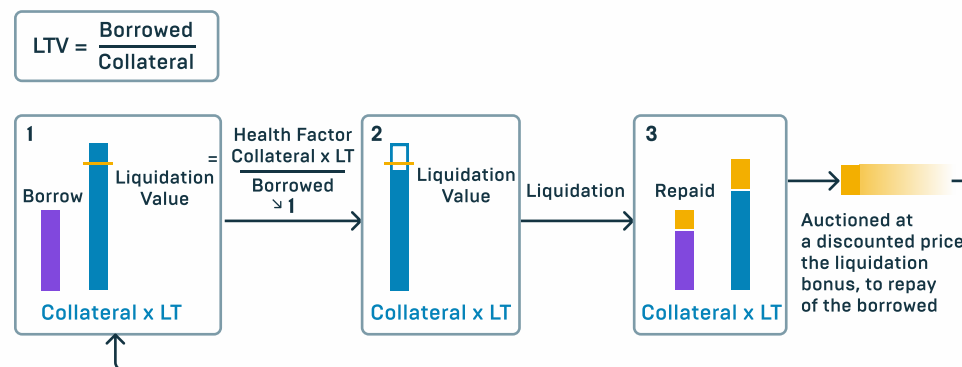
If an EAST vault is backed by different assets, its total **LR** is considered as a weighted average of all assets in the vault:

$$\bar{x} = \frac{\sum_{i=1}^{n} w_i \cdot x_i}{\sum_{i=1}^{n} w_i} = \frac{w_1 x_1 + w_2 x_2 + \ldots + w_n x_n}{w_1 + w_2 + \ldots + w_n}$$

x — total LR,
w — cost of an asset in the vault
n — amount of an asset in the vault

$$LTV = \frac{Borrowed}{Collateral}$$

LTV — Loan to Value, LT — Liquidation Threshold

Let's give a simple example of liquidation. Imagine, one day Bob created a vault and placed **140 WAVES** at a price of $5 ($700) and **0.2 ETH** at a price of $1,500 ($300) in the vault. Assume, both assets have the same BR at 250% BR, so this results in **400 EAST** ($400) for Bob.

The total LR of this vault is calculated according to the weights and liquidation ratios of the assets within. Let's say, for example, ETH LR is 150% and WAVES LR is 160%. That gives a **157% LR** as a weighted average for Bob's vault.

One day both WAVES and ETH drop in price: WAVES goes down to $3.14 and ETH goes down to $942. As a result, Bob's vault collateral with 400 EAST is now worth $628. Thus, the vault BR is now equal to 157%, which is the liquidation threshold.

At this moment, Alice can liquidate up to 50% of the vault. The portion of collateral the liquidator gets depends on the liquidation fee and the actual BR of the vault. At the launch of EAST 2.0 the liquidation fee equals **10% (0.1)**. Let's see what part of the vault collaterals Alice can collect:

Share of Liquidator = 0.5 – (0.5 x Liquidation Fee) = 0.5 – (0.5 x 0.1) = 0.45, or 45% of the vault collateral

Applying this formula to the vault's collateral:

0.45 x (3.14 x 140) = 197.82 – $ in WAVES, or 63 WAVES; 0.45 x (942 x 0.2) = 84.78 – $ in ETH, or 0.09 ETH.

To get it, Alice must contribute a half of total EAST in the vault, assuming 100% backing ratio:

Liquidation Cost = 0.5 x Total EAST in the Vault = 0.5 x $400 = $200, or 200 EAST

What about the ROI?

$$\text{Liquidation ROI} = \frac{\text{Total Revenue} - \text{Total Cost}}{\text{Total Cost}} \times 100 =$$

$$= \frac{282,6 - 200}{200} \times 100 = 41.3\%$$

So let's congratulate Alice on such a nice deal :)

There might be cases when a vault's BR drops so low that liquidators won't be interested in it. Such vaults will be automatically liquidated with the protocol's treasury, accumulated with EAST stability fee.

Stability fee

The stability fee is used to reserve WEST as a safety cushion for the protocol. The fee size depends on the price of EAST. If the price decreases, the fee increases, and vice versa. The protocol charges the stability fee, when users close their vaults; this can be done any time, in accordance with the SafeFi concept.
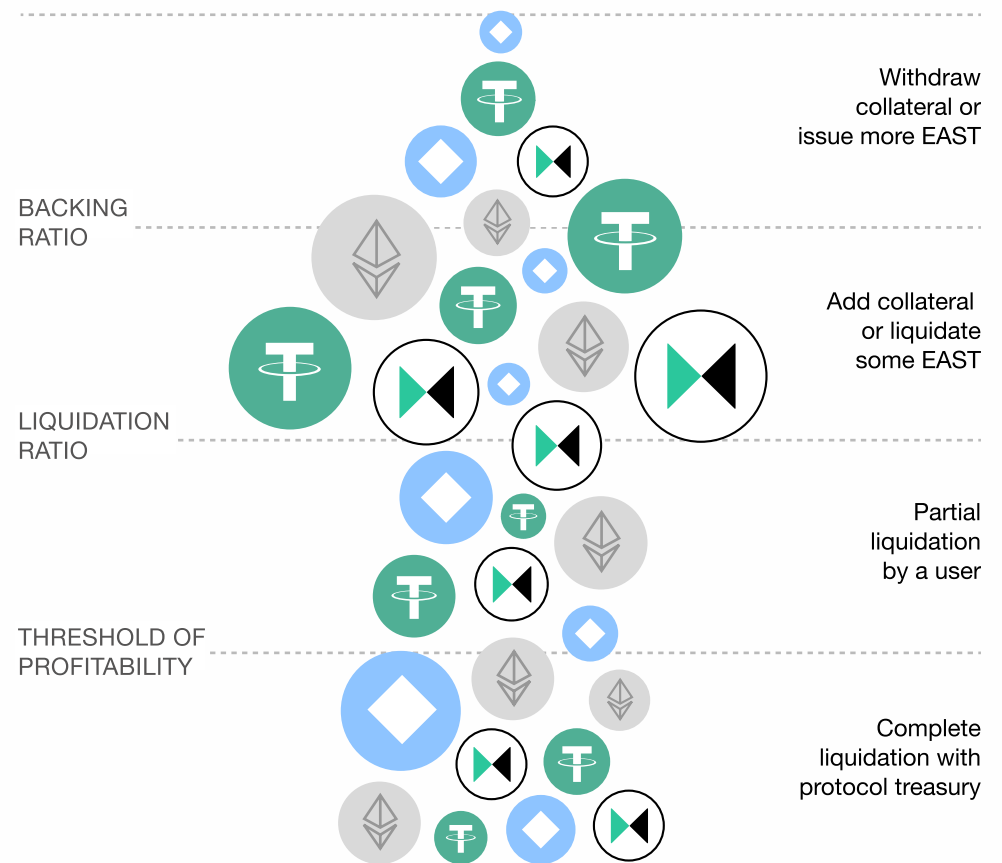
As of EAST 2.0 launch, stability fee equals **1.5%, or 0.015** per year. This is how the stability fee is calculated for a vault:

Stability Fee = ((Borrowed EAST x (1 + Basic Stability Fee in Decimals)) ^ (Age of Debt in Seconds/ 31,536,000)) – Borrowed EAST

Now let's check out an example. Imagine, Bob issued 100 EAST and exactly after 180 days he closed his vault. Then:

Bob's Stability Fee = ((100 x (1 + 0.015) ^ (15,552,000/31,536,000)) – 100 = 0.73693504417 EAST

EAST is rounded to 8 decimals in favor of the protocol. Therefore, Bob will have to provide an extra **0.73693505 EAST** as a stability fee. Then, his 100 EAST will be burned and the collateral returned to the owner.

BACKING RATIO

Withdraw collateral or issue more EAST

Add collateral or liquidate some EAST

LIQUIDATION RATIO

Partial liquidation by a user

THRESHOLD OF PROFITABILITY

Complete liquidation with protocol treasury

Vault scenarios depending on the backing ratio

EAST Peg Assurance

After describing all the EAST mechanics, let's put together all the EAST peg mechanisms:

- EAST stability fee changes to balance users between issuing EAST and buying it from the market.
- Stability fee is accumulated as a safety cushion for the protocol.
- Redeeming EAST within the protocol helps to increase its price and restore the peg.
- "USDT as a collateral" option can also be used to create an instant arbitrage mechanism and eliminate market inefficiencies almost immediately.

Such a variety of EAST stablecoin mechanisms protects EAST from the depegging issues that even affect major fiat-backed stable coins.

ORIENT Incentive Program

All owners of active EAST positions participate in the ORIENT mining program and receive ORIENT tokens on a regular basis. The ORIENT emission is planned to last four years after the EAST launch. Your share of the ORIENT mined is directly proportional to your share of total EAST debt. You can collect your ORIENT from the protocol any time you want.

Purpose	Share	Sum and period
Mining program	65%	3,521,572 ORIENT during 4 years
Team support	10%	538,461 ORIENT during 2-year linear vesting
DEX initial liquidity	10%	538,461 ORIENT
Marketing, community, other activities and collabs	15%	807,718 ORIENT

ORIENT tokenomics
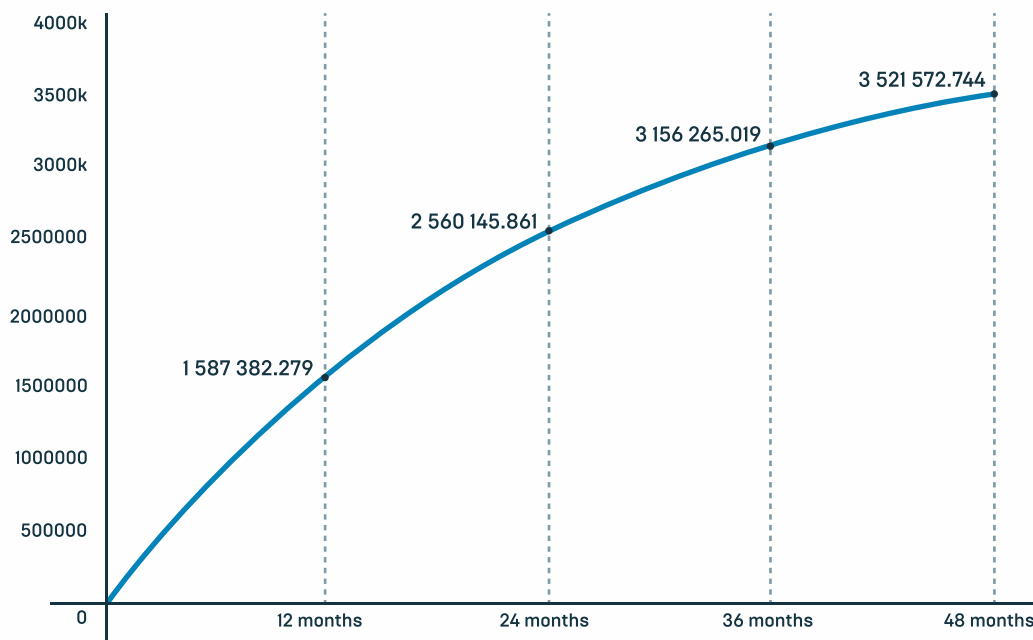
ORIENT mining program

EAST and ORIENT Staking

EAST staking increases utility by motivating users to buy the stablecoin from the market and stake it for rewards. Staking works both in the Waves and the Waves Enterprise blockchains. Staking APR in these networks remains the same, thanks to the Staking distribution service (you can read more about its role in the EAST.Finance Protocol Infrastructure section).

This is how staking works:

01
A user stakes EAST.

02
The protocol stakes the collaterals of these EAST.

03
In return, the user gets a sum of stEAST tokens calculated as the EAST amount staked by the user divided by stEAST price. stEAST price changes every 24 hours depending upon how much staking rewards the staking contract has received.

04
If EAST price ranges between $0.995 and $1.005, the protocol uses the staking rewards to buy EAST.

05
When a user wants to unstake EAST, he attaches his accumulated stEAST amount to his request. The protocol exchanges these stEAST for EAST according to the actual stEAST price (updated every 24 hours, as you remember).

06
The protocol sends these EAST tokens to the user. Not some shady staking tokens, but real and liquid EAST stablecoins.

ORIENT staking works the similar way. 70% of the total staking income goes to EAST stakers, 30% – to ORIENT stakers.

EAST.Finance Client Functionality

You can perform any EAST operations right in the web client available at EAST.Finance website.
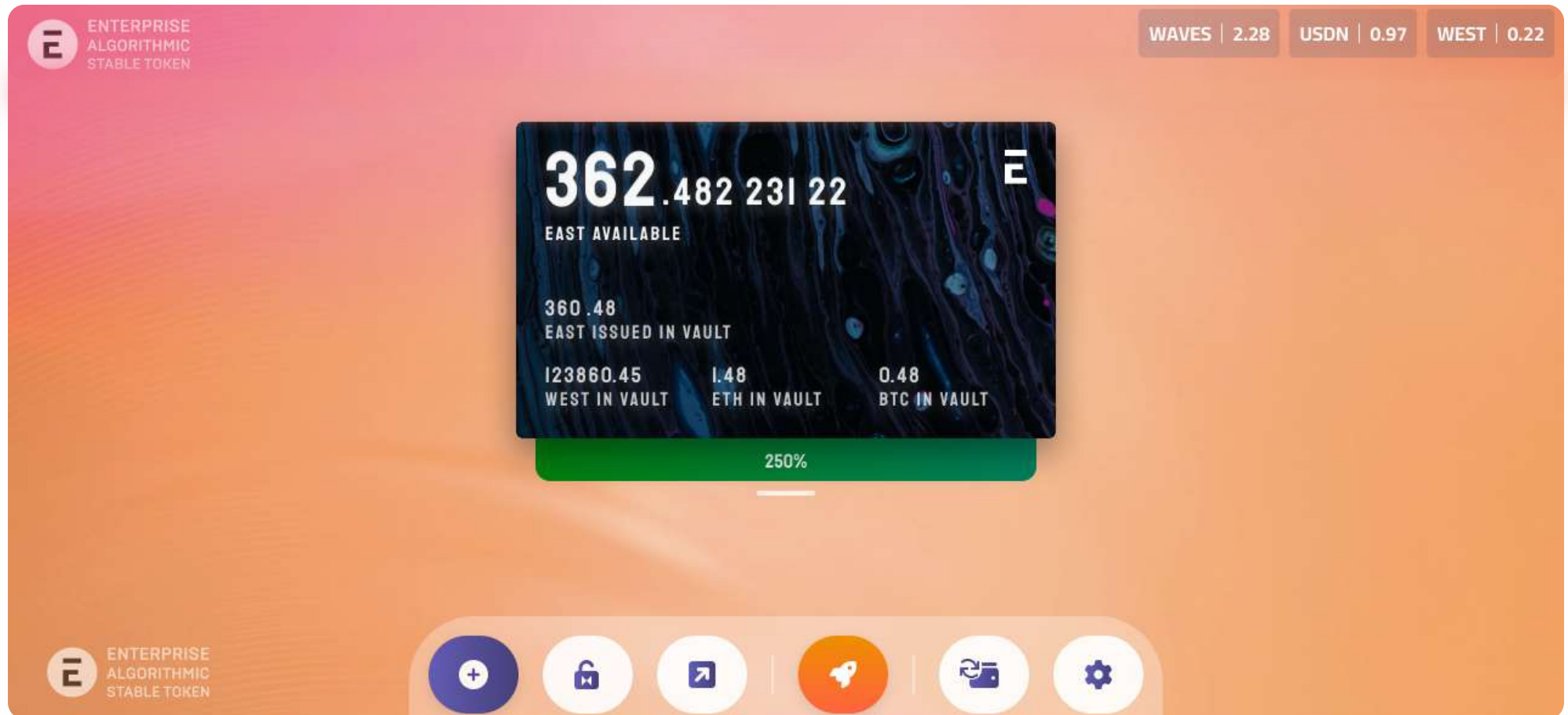
All important information about a vault is packed in a single widget. In the right upper corner you can check the actual exchange rates of various collateral types.

You can supply extra collateral any time, so as to increase your vault's BR.
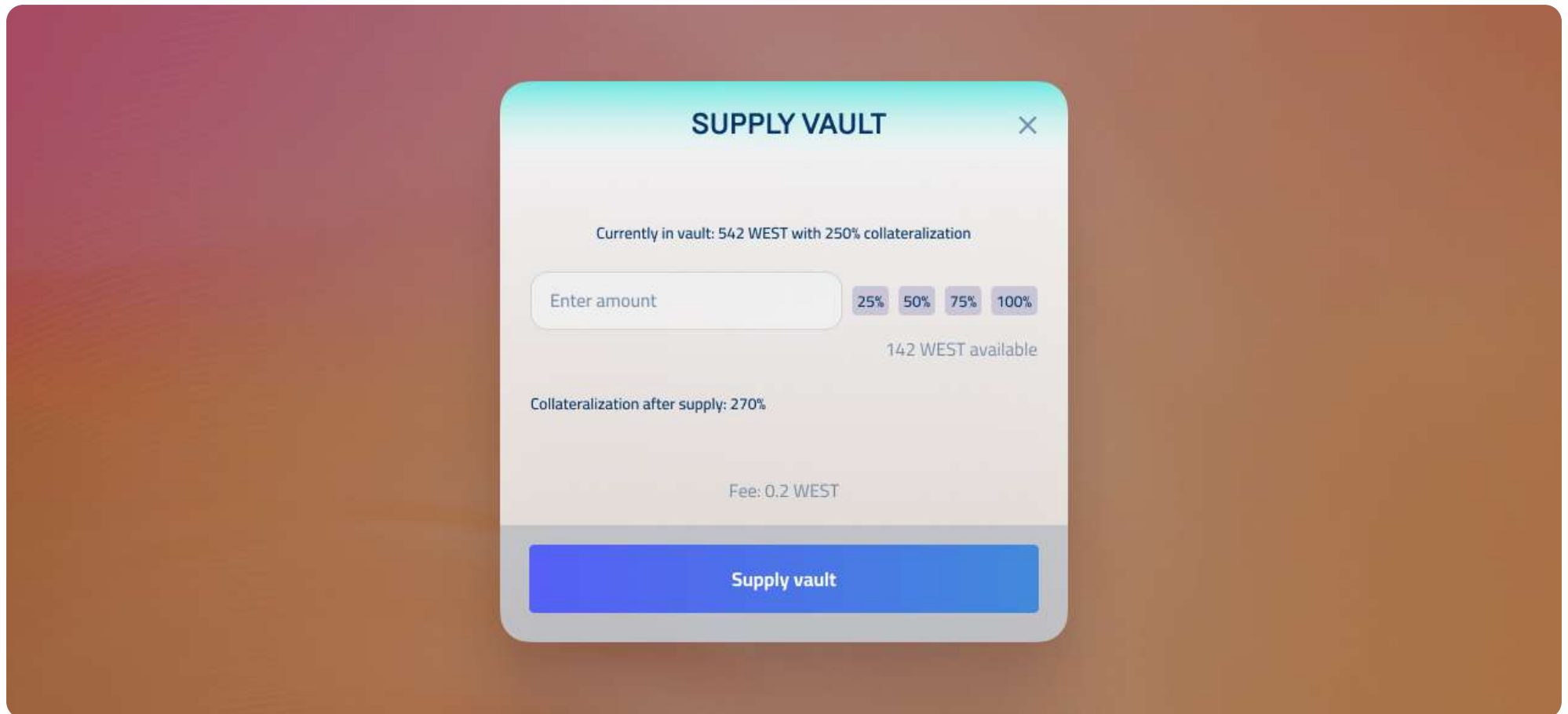
If your vault BR exceeds the overcollateralization threshold, you can use your free collateral to issue extra EAST.
Or you can just take these assets back from your vault.
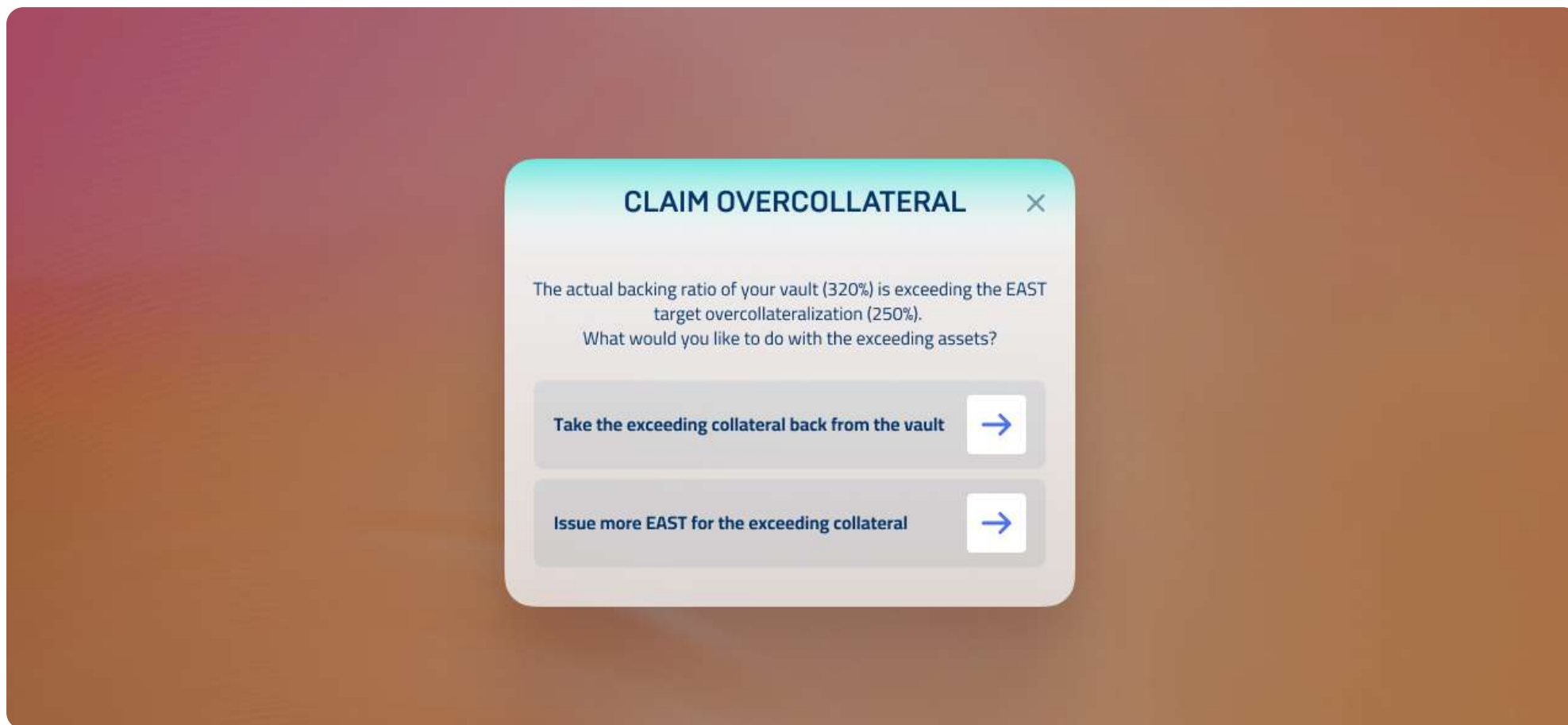
Thanks to EAST mechanisms, you can close your vault to return your collateral. Or you may return a portion of your EAST to increase the BR of those remaining in your vault.
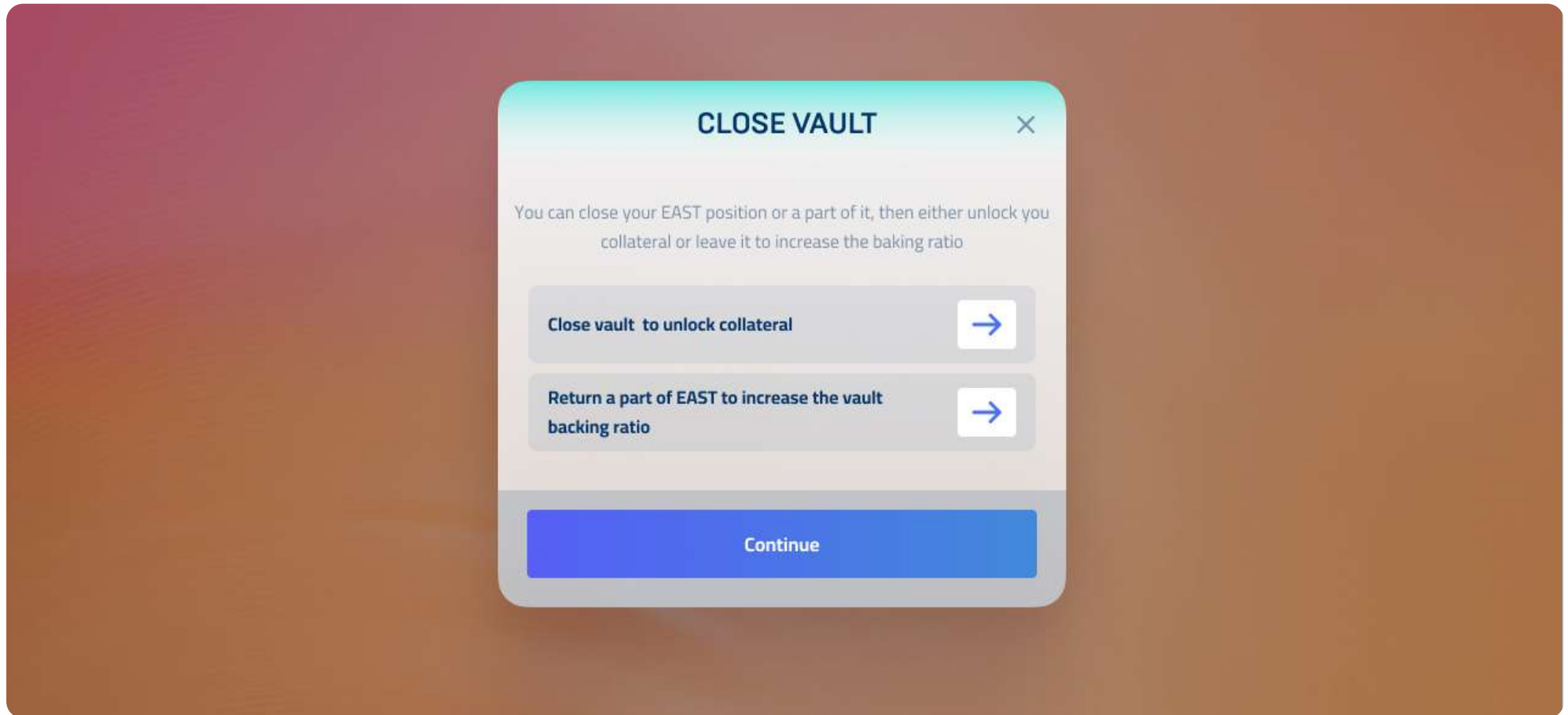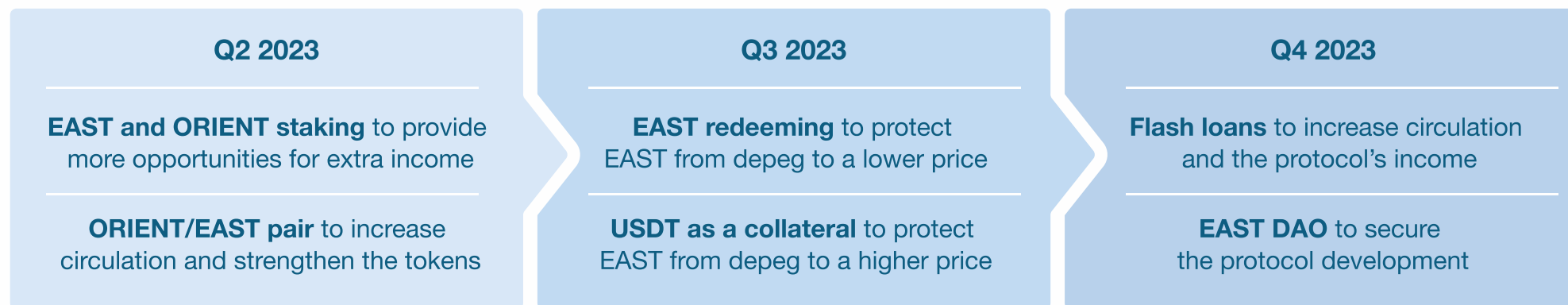

The EAST client provides a number of useful features, such as a multi-wallet connection, transaction history, EAST transfer capabilities, and collateral level notifications in the browser.

From the client you can also move to a special Telegram channel with EAST vault collaterals.

EAST plans

We're constantly developing EAST.Finance. Our current focus is adding more collateral options and blockchain protocols. EAST has already appeared at WX Network, Swop.fi, Puzzle Swap, and we're planning to expand it further. Finally, we have scheduled a redesign of the EAST client — this will be covered in future editions of this white paper.

Q2 2023	Q3 2023	Q4 2023
EAST and ORIENT staking to provide more opportunities for extra income	**EAST redeeming** to protect EAST from depeg to a lower price	**Flash loans** to increase circulation and the protocol's income
ORIENT/EAST pair to increase circulation and strengthen the tokens	**USDT as a collateral** to protect EAST from depeg to a higher price	**EAST DAO** to secure the protocol development

About us

EAST.Finance is driven by a decentralized team of blockchain developers. We are committed to the Waves Enterprise technology stack, though we're always seeking opportunities to develop EAST.Finance in other reliable blockchains.

We strongly believe in EAST stablecoin as a great SafeFi opportunity for investment and continue to work on growing its stability, flexibility and profitability for our users.

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