



VEROS

WHITEPAPER

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## I. Introduction

A cryptocurrency is a medium of exchange, which makes use of cryptography to secure transactions and to control creation of additional currency units. The development of cryptocurrency has been actively growing in the past decade, thus offering a broad range of transactional possibilities for both users and organizations.

Our aim to become the first stable digital currency whereby the distribution and value of the currency is not controlled solely by the miners, but also the community has a vital role in this. Our purpose is to empower it through an Affiliate Marketing Channel, topping up projects with VEROS. The VEROS Community aims to inspire, be inspired, to educate and to support its members.

VEROS provides a use case for storing and processing digital transactions in a secure and transparent way. Our system is based on the Ethereum blockchain application platform and follows the cryptocurrency standards offered by Ethereum at the deployment moment: Proof-of-Work (PoW).

The Ethereum blockchain's smart-contracts are used to validate and protect certain rules regarding the distribution, freezing and ownership of coins. These contracts are enforced by the Ethereum network and cannot be invalidated or changed by the company nor by the users.



## II. Blockchain

### WHAT IS BLOCKCHAIN?

A blockchain is a distributed database, which makes the creation of a digital ledger of transactions and share it among a distributed network of computers possible. It uses cryptography to allow each participant on the network to manipulate the ledger in a secure way without the need for a central authority. It maintains a continuously-growing list of records (blocks), each containing a timestamps and a link to the previous one.

VEROS is built and available on a blockchain and is accessible as a DApp (Distributed Application). The main reason for using blockchain technology in the development of VEROS is to provide a decentralized infrastructure that is stable and secure for all the involving parties.

The main advantages of solutions built on blockchain technologies are:

#### 1. Trustless exchange:

Two parties are able to make an exchange without the oversight or intermediation of a third party, strongly reducing, or even eliminating, counterparty risk.

#### 2. Empowered users:

Users are in control of all their information and transactions.

#### 3. Durability, reliability, and longevity:

Thanks to the decentralized networks, blockchain does not have a central point of failure and is better able to withstand malicious attacks.

#### 4. Transparency and immutability:

Changes to public blockchains are viewable by all parties creating transparency, and all transactions are immutable, meaning they cannot be altered or deleted.



EXCHANGE



CYBER IDENTITY



SECURE



BLOCKCHAIN

## GROWTH OF DISTRIBUTED LEDGER TECHNOLOGY

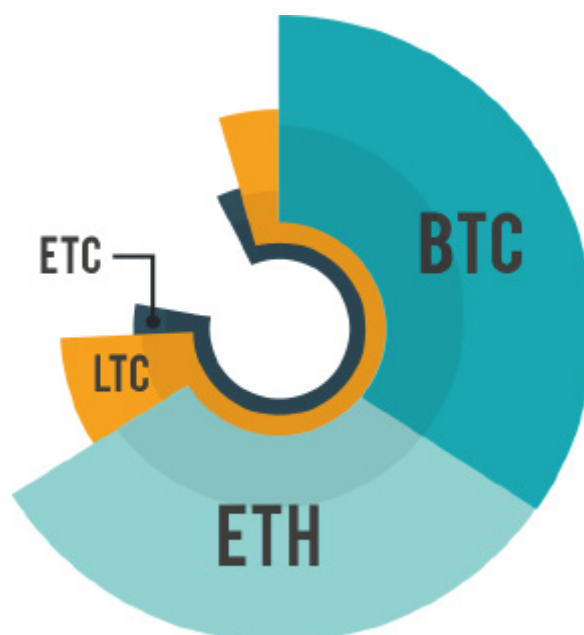
A distributed ledger represents a consensus of replicated, shared and synchronized digital data, geographically spread across multiple sites, countries and/or institutions. The efficiency of distributed ledger derives from the immediate reflection of changes made by any participant towards all copies of the ledger. The full potential of distributed ledgers is attained at the moment when other applications are layered on top of them (e.g. smart contracts).

Smart contracts represent contracts whose terms are recorded in a computer language; they can be automatically processed by computer systems. It is economically viable to form these contracts, as there are low contracting, enforcements and compliance costs.

At the moment, the distributed ledger technology is still at the beginning and the blockchain represents one of the very first implementations that make use of it. The predictions regarding its development are positive. A large number of experts are pointing out that the blockchain technology will revolutionize the way individuals are using emerging technology. Large banks and governmental institutions are working to implement blockchain applications in order to provide more secure and trustworthy services to their customers.

As the blockchain technology hits mainstream, there are numerous cryptocurrencies that appear each year, all of them competing for the same market. VEROS isn't going to be just another digital currency, as it's own philosophy is to create a markershare around it's core initial users.

In the chart below you can see how fragmented the cryptocurrency market is:



## III. Architecture and development

### DESIGN

VEROS is built on Ethereum, a blockchain-based distributed computing platform that runs smart contracts.

By using Ethereum as the abstract foundational layer, we are able to implement all the features and rules on VEROS directly into smart contracts, which are deployed and processed by the entire network. By using the entire Ethereum infrastructure with the purpose of validating transactions and adding new blocks to the blockchain, we minimize any possible attack on the coin.

On top of Ethereum, we have built the services using Geth (Go-Ethereum - <https://github.com/ethereum/go-ethereum>). Geth is a multipurpose command line tool that runs a full Ethereum node implemented in Go. By installing Geth, one can take part in the Ethereum live network and mine real ether, transfer funds, create contracts and send transactions, explore block history etc. The Geth is running on a proprietary Linux server with no RPC/HTTP open ports. The communication, which involves the Geth, is managed through the Node.js intermediary application and the Ethereum network.

The applications connecting to the Ethereum blockchain are built on Truffle (<https://github.com/ConsenSys/truffle>). Truffle is a development environment, testing framework and asset pipeline for Ethereum. We use Ethereum Truffle for:

- Built-in smart contract compilation, linking, deployment and binary management
- Configurable build pipeline with support for custom build processes.
- Network management for deploying to many public & private networks

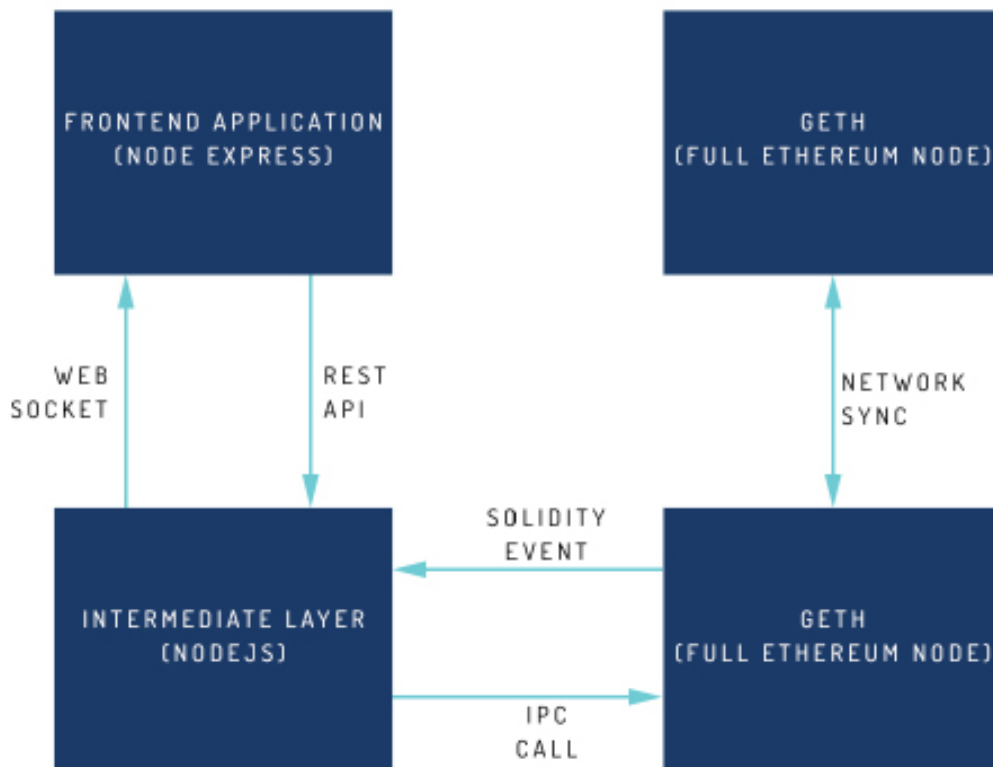
The communication between the Ethereum blockchain and the web-applications is managed using the Web3.js framework (<https://github.com/ethereum/web3.js/>). Web3.js is the Ethereum compatible JavaScript API, which implements the Generic JSON RPC spec.

The communication layer between GETH and the front-end application is implemented using Node.js, which uses an event-driven, non-blocking I/O model that allows it to manage communications between the users and VEROS. The Node.js application is communicating with GETH through IPCs (Internal Procedure Calls). The Node.js application is sharing the same server with Geth.

Communication with the Ethereum node is done through the JSON RPC API. JSON-RPC is a stateless, light-weight Remote Procedure Call (RPC) protocol. Primarily this specification defines several data structures and the rules around their processing. It is transport agnostic in that the concepts can be used within the same process, over sockets, over HTTP,

or in many various message passing environments. It uses the JSON (RFC 4627) as data format.

The frontend application is implemented using the AngularJS framework (<https://github.com/angular/angular-seed/wiki>). This application is located on a different server and communicates with the Intermediate Layer using Web Sockets and a REST API.



## BENEFITS

The main benefit of VEROS is offering access to individuals, which are not linked to any banking services, thus enabling them to use financial services for their daily transactional processes. VEROS has the main advantage of offering the possibility of transitioning online and offline and exchanging VEROS into FIAT money in a simplified manner.

The blockchain technology enables the user to transfer funds in a fast and easy manner, which excludes third-party actors, unlike the traditional banking systems.

## TECHNICAL MOTIVATION

Ethereum is a public blockchain-based distributed computing platform, featuring smart contract functionality. It provides a decentralized virtual machine, the Ethereum Virtual Machine (EVM), which can execute peer-to-peer contracts using a cryptocurrency called Ether.

We see three main approaches for building advanced applications on top of cryptocurrency:

- building a new blockchain.
- using scripting on top of Bitcoin.
- building a meta-protocol on top of Bitcoin.

Building a new blockchain allows unlimited freedom in building a feature set. Still, there is a considerable security risk with new blockchains; for example, if there aren't enough miners in the very beginning, the network is vulnerable to a 50%+1 attack.



## IV. VEROS Key features

### **VEROS CONSULTANCY**

The team behind VEROS is an innovative technology company based in Singapore. Most of the application development is implemented in Europe with experienced consultants and experts located worldwide.

Our purpose is to provide a comprehensive eco-system built around the cryptocurrency featuring multi-platform wallets, integration with exchanges, etc.

### **VEROS AFFILIATE NETWORK**

The majority of VEROS will be distributed through affiliate systems, where members will be rewarded coins for bringing merchants on board to accept VEROS for payments.

All affiliates rewarded VEROS will follow a programmed release contract in which each payment will be processed to the members wallet over a period of 25 weeks. The members will receive 1/25 of the full payment they are entitled on a weekly bases.

The total supply of VEROS are divided into equally sized stacks, and a new stack can only become available for distribution when a minimum of 80% of the previous stack has been scheduled for transfer to it's affiliate members. This is made in order to prevent any pump and dump strategy and/or flooding of the market.

Additionally, the VEROS distribution plan involves a best case scenario that limits the speed of release. The best case scenario is achieved when the total amount of VEROS that are added to the distribution schedule this week are:

- 20 million during the first week.
- 20 million + 10 million for every week passed since genesis. Thus, best-case scenario will increase by 10 million each week.

When the best-case scenario is reached, no new stacks will be released on the current week, even if the previous stack is already more then 80% consumed.

The white paper is currently in development and more functions will be added as the product evolves.

## **BLOCKCHAIN EXPLORER**

The blockchain explorer is a web-based tool that can be found at <https://explorer.veros.org>. It allows any user to view the balance of a VEROS wallet. The application is accessible without authentication and provides network statistical data such as:

- The total amount of veros in circulation at a given time (the coins in wallets that aren't frozen).
- The transactional volume available for different time slots (the last hour, 24 hours, 7 days, one month).
- The number of blocks, of wallets, etc.
- Price of the VEROS on various exchanges.

The VEROS explorer offers REST API for integration with 3rd party systems that want to display real-time information for the VEROS network. The documentation for the API is publicly accessible at: <https://explorer.veros.org/api-docs>.

## **VEROS WALLET**

The VEROS Wallet is a cross-platform wallet, enabling users to store VEROS.

For the VEROS, the wallet provides the following functionalities:

- Generate a new address on the blockchain network.
- View VEROS balance and send transactions to other wallets.
- View transactions, pending releases.
- View and create staking deposits.
- Create payment request and display them as QR codes.
- Scan QR codes to send VEROS payment.

## ECO-LIFE

As the system continues to develop, we predict, based on the expected number of application users, that there will be a balance between the supply and demand for VEROS, which will ultimately lead to an increase in its value.

VEROS has all the prerequisites to be a viable replacement for FIAT money, allowing millions of unbanked individuals to gain access to easier ways of paying, while providing them the same opportunities as banked persons. This is the key feature that will allow VEROS to be reused continuously, thus forming a transactional eco-system.

VEROS will offer access to both online and offline transaction for services and goods to the wallet owners. We foresee that this will solve challenges in many industries like:

- **Gaming:** Online gaming is a continuously expanding industry but many passionate gamers find it difficult to upload funds in various gaming platforms. VEROS is the solution and we foresee the demand for this cryptocurrency in this field.

- **Real Estate:** A great number of real estate developers are searching for simplified ways for them to accept payments for their real estate, especially from overseas investors. VEROS represents a secure and viable alternative with the potential to create increased revenues for the developers.

- **eCommerce/Merchant Platforms** represent one of the greatest tools to get a public community feedback. With an increased number of merchants that accept VEROS the greater demand will be for it, resulting in its increased value.

- **ATMs** are a fast and easy method of exchanging from FIAT to cryptocurrency or the other way around and are one of the main bridges between the cryptocurrency world and the FIAT money world.

- **Public Cryptocurrency exchanges** offer the opportunity to exchange various cryptocurrencies (VEROS, Bitcoin etc.) or into FIAT money.

## SCALABILITY

Being a cryptocurrency that uses a distributed ledger technology, VEROS ecosystem is a scalable one. Its growth is only controlled by the amount of VEROS in circulation at a certain point in time and the number of transactions/reuses of the coin which are taking place.

The total supply is 10,000,000,000 VEROS (10 billion units).

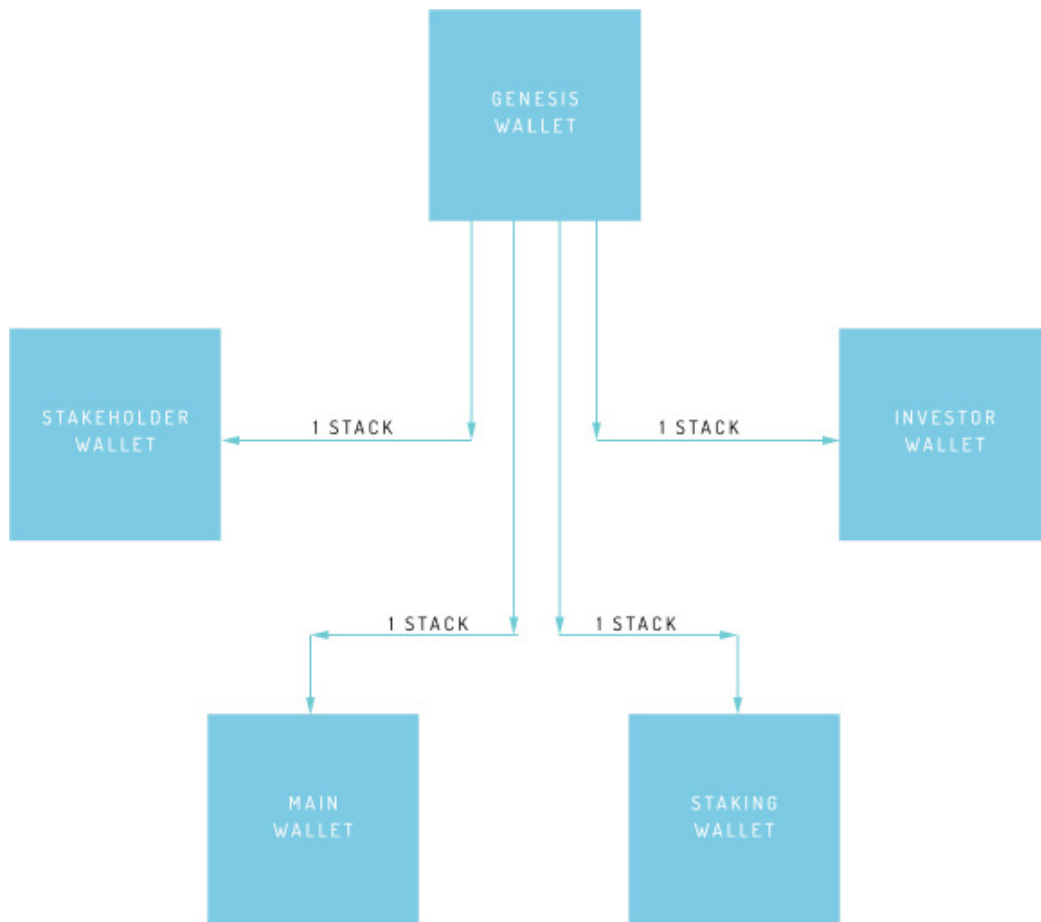
The VEROS are issued in stacks of 100,000,000 VEROS (100 million units).

In total, there will be 100 stacks.

Since VEROS doesn't use mining for creating new cryptocurrency units, the initial digital currency will be distributed using an Affiliate Marketing platform that follows rules written in the Ethereum smart-contract.

## INITIAL DISTRIBUTION

The Genesis Wallet (or Master Wallet) will hold all the initial 100 stacks. During the publication of the smart-contract to the Ethereum network, the initial distribution plan will occur.



The Genesis Wallet (or Master Wallet) will transfer a total number of 4 stacks to a number of special wallets:

- 1 stack will be sent to the Stakeholder Wallet, which is locked for three years in order to not flood the market with VEROS.
- 1 stack will be released to a Investor Wallet.
- 1 stack will be sent to the Staking wallet in order to have enough funds to provide the users which have deposits with their daily interest.

## AFFILIATE NETWORK DISTRIBUTION

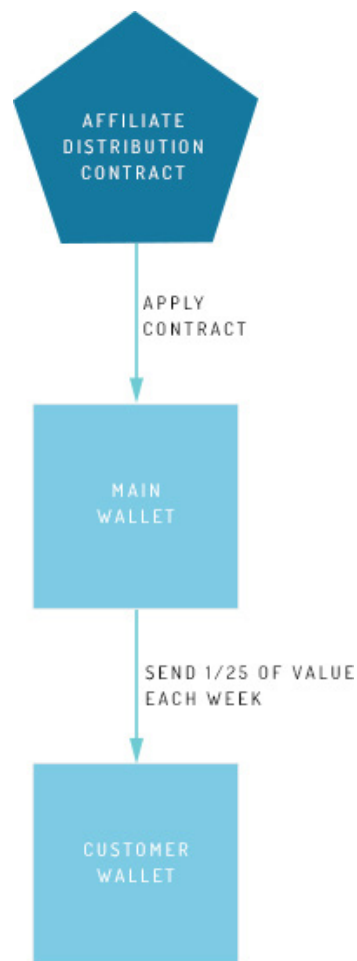
VEROS is distributed through an affiliate network using the rules that are written in the Ethereum contracts.

The affiliate distribution plan is detailed below:

- Payment scheduled transactions are signed using the Main Wallet key which is controller by the Affiliate Network Distribution company. The only transaction that the Main Wallet can do is to add scheduled payments. Normal VEROS transfer from this wallet are not possible (wallet is permanently locked).

- Packages are distributed to the user over a period of 25 weeks starting with the date his wallet was added to the affiliate network distribution schedule. The user will receive his VEROS.

- After a payment scheduled has been committed, there is no method to stop it, to delay it, or to change the receiver of the VEROS.



## STACK UNLOCK PROCESS

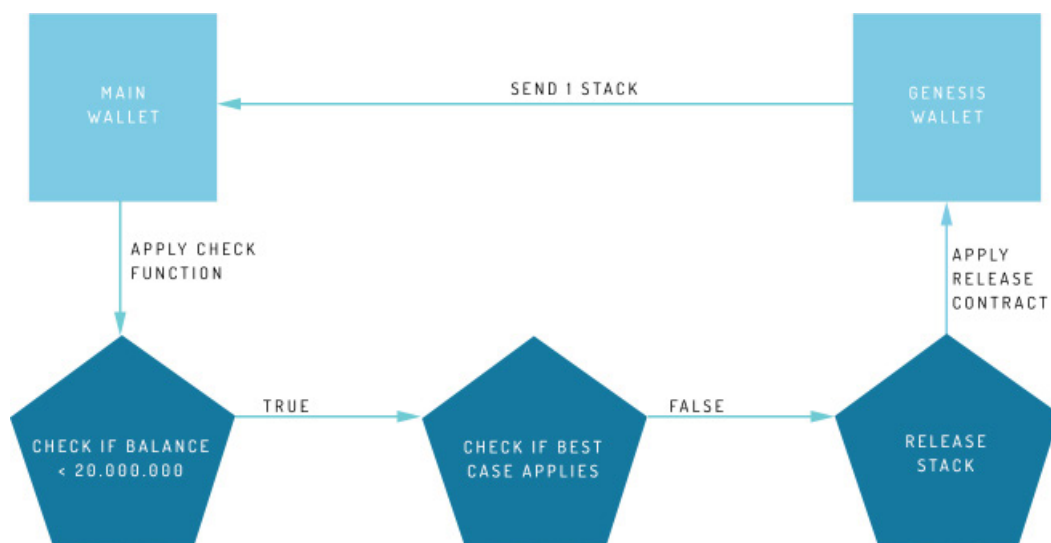
The VEROS network is composed of 100 stacks of 100,000,000 VEROS each. At the beginning of the contract, the Genesis Wallet contains 100 stacks, of which 4 are transferred to certain special wallets.

As the Affiliate Network Distribution evolves over time and the Main Wallet balance is consumed, more stacks are released from the Genesis Wallet to the Main Wallet.

There are 2 rules for releasing stacks from the Genesis Wallet to the Main Wallet:

- Balance of Main Wallet is less than 20% of a full stack (less than 20,000,000 VEROS)
- Even if the Main Wallet balance is less than 20%, the "best case" scenario could stop the stack release trigger. The "best case" scenario states that the total scheduled distribution added in the current week should be more than the value added in the previous week plus 10 million. As an example, the "best case" scenario is: 20 million VEROS for first week, 30 million VEROS for second week, 40 million VEROS for 3rd week, etc.

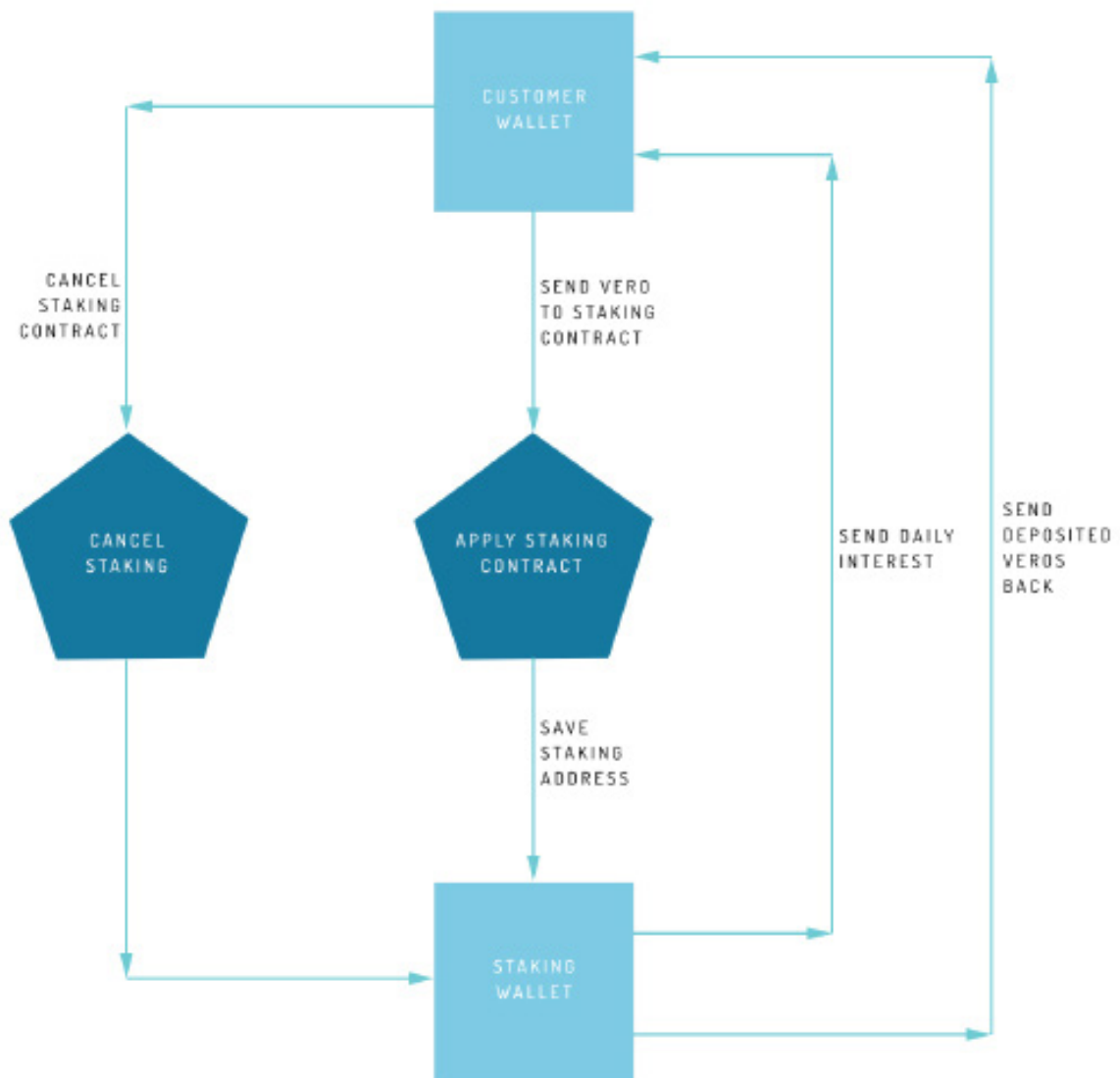
The stack unlocking contract is detailed below:



## STAKING PROCESS

VEROS users can opt for staking. Depending on the value of their deposits, they will get a variable interest. The fixed deposits are set for 3/6/12 months and the interest is returned daily.

When a user decides to get a fixed deposit, he will send their VEROS to the staking wallet, which is a smart wallet that sets the amount of interest automatically (based on the VEROS amount). The Staking Wallet is filled during the Genesis with an amount of 100 million VEROS. This wallet is re-financed every time the amount drops under 10% of the initial value.



The staking interest is calculated based on the amount of VEROS sent to staking. The staking interest is paid on a daily basis.

The interest is calculated as in the table below:

STAKE VALUE (VRS)	BASIC INTEREST	3 MONTH PLAN	6 MONTH PLAN	12 MONTH PLAN
FROM 0 TO 10,000	1%	1.5%	2%	2.5%
FROM 10,001 TO 25,000	1.5%	2%	2.5%	3%
FROM 25,001 TO 50,000	2%	2.5%	3%	3.5%
FROM 50,001 TO 100,000	2.5%	3%	3.5%	4%
FROM 100,001 TO 250,000	3%	3.5%	4%	4.5%
FROM 250,001 TO 500,000	3.5%	4%	4.5%	5%
FROM 500,001 TO 1,000,000	4%	4.5%	5%	5.5%
FROM 1,000,001	4.5%	5%	5.5%	6%

The user can cancel the staking deposit at any time, receiving no penalty if the plan doesn't have a fixed period (3/6/12 months).

If the user selects a fixed period staking plan (3/6/12 months) and later decides to cancel the plan before the due-date, he will be penalized with the full interest paid on that deposit plus a 10% from the staked value.

After the staking plan is finished (3/6/12 months), the deposit will continue as a normal interest without a fixed period.