StackOS Litepaper V1.0

Codeless application deployment.
Hassle-free.
Decentralized.
Open protocol.

StackOS.io

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Born out of real pain, and developed to answer a wider audience

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Introduction

Three years ago, the StackOS team ran into an obstacle while developing a decentralized learning platform.

How can it be truly decentralized if the application is running on one single account of a centralized cloud provider like Amazon AWS or Google Cloud?

In case of a hazard or crackdown on blockchain technology by the government, the application could be shut down. We have already witnessed this multiple times, including the US presidential elections in 2020, and even more frequent in Asia and Middle east countries. We decided we need to solve this if we want to create a truly decentralized product.

While developing a solution for this internally, the StackOS team realized developers from all over the world would greatly benefit from the decentralized cloud, where projects can have real sovereignty over their application and data. That is when the focus shifted towards developing a decentralized cloud for the masses. With one important tweak: an incredible, simple and codeless user experience.

The way we see it, you can have the best technology in the world, but if it's not designed to make it easy to use, it's not even worth building it.
This is why UX is one of the most important priorities for StackOS. We want to make it accessible to any developer out there, without the need for a dev ops team or a special skill set.

The StackOS ecosystem consists of:
- Parties contributing compute resources
- The community governing the protocol by staking STACK tokens and earning a share of profits, and annual yield.
- And of course, developers that deploy applications on the decentralized cloud of StackOS. Developers can even list, sell and buy applications on the StackOS App Store, turning them into NFTs and earning from resellers as well.

The StackOS Platform provides developers with a lot of benefits, with the main ones being:
- The ability to deploy any application under the sun in minutes anonymous
- Staying more secure
- Enjoy lower costs and zero maintenance requirements (the StackOS infrastructure protocol automatically maintains the infrastructure, removing the need for DevOps which can cost a mid to large size company hundreds of thousands to millions of dollars a year!)

Furthermore, within the StackOS App Store developers will be able to list, sell and buy applications, even turning applications into NFT's, earning from resellers as well.

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On the StackOS platform developers will be able to deploy any application under the sun in minutes on the decentralized cloud of StackOS.

Deploying an application on StackOS is anonymous, more secure, and with lower cost.

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1 The cloud

Cloud has been around for many years already, it is only in recent years that companies noticed the potential of deploying applications on the cloud. From small companies to large enterprises, every industry is adopting this technology at a rapid pace with the aim to greatly benefit from it. Results from research by Flexera show that 92% of the enquired enterprises have a strategy to use the cloud.

What are the general benefits of deploying on the cloud?

1

Higher costs, but low upfront cost
By deploying on the cloud you don't have to invest in dedicated servers, management systems, backup, and storage hardware. This significantly lowers the setup and maintenance cost for an organization. In addition to this, the workforce cost and power cost are lowered.

2

Enhanced reliability
The cloud is much more reliable because deployed applications can be rolled back to a previous version or snapshot. If a disaster strikes and the application breaks down it can be recovered quickly. The recovery process can be done in a very short time frame making cloud disaster management a very cost-effective process.

3

Increased accessibility
With work from home being adopted at a rapid pace by employers and employees, it becomes incredibly important to host companies' applications on the cloud. This way they can be accessed anywhere online and not at a specific location.

4

Scale on demand
A major reason why enterprises deploy their applications on the cloud is because of the ability to quickly scale on demand. With more competition entering the market or your user base growing rapidly the demand for compute resources can fluctuate quickly. In case of more demand companies can quickly increase the compute resources without having to buy and install more servers.

2 Problems of the centralized cloud and StackOS' solutions

Despite the cloud offering many benefits for companies there are also flaws, even further exposed by the introduction of blockchain technology and ideology of decentralization. The StackOS team has an extensive background in DevOps moving medium to extremely large enterprises to the cloud, so with their experience they noticed aspects of the cloud that needed a revamp. An overview of the problems at centralized cloud providers and how StackOS fixes this:

1

Once a company decides they want to deploy their application on a centralized cloud provider it takes weeks of preparing the architecture of the application through the expertise of highly skilled DevSecOps resources with high wages. On StackOS codeless interface, developers can deploy any application **in minutes!**

2

At centralized cloud providers the company or person deploying the application is not anonymous. Cloud providers know exactly who is deploying what application on their cloud and can decide to shut it down. When deploying an application on StackOS there is no identification process, it is **completely anonymous.**

3

Applications can be stopped by either the centralized cloud provider, a hazard or a bad actor. Enterprises deploying their applications on a centralized cloud have to abide by many rules. If the cloud provider finds that you don't comply with their rules, your application will be shut down. On top of that, in case of a hazard, most companies don't have a back-up plan to re-deploy the application. Once deployed on StackOS your application can't be taken down making it **unstoppable!**

4

After the deployment of the application on a centralized cloud its infrastructure needs to be maintained. If not done at all or not done correctly it makes the application prone to hacks. Maintaining the infrastructure is extremely expensive: it costs hundreds of thousands to millions of dollars for mid-to large-size companies. The infrastructure of applications deployed on StackOS' decentralized cloud are automatically maintained, thereby **cutting the DevOps costs significantly!**

5

Buying compute resources at a centralized cloud means that you have to use all the resources in a month. At StackOS you only pay for the resources you use, rest comes back as rebates. This **reduces the total cost of operation up to 70%.** The prices further reduce with the economy of scale. In the future, the price will be determined by using data from DAO and the infra node providers.

6

Considering the savings in the DevOps costs and the pay per use, depending upon the size of the organization, **it's up to 10 times cheaper to deploy and operate on StackOS** compared to the central cloud providers.

7

At other cloud providers, the revenue goes to shareholders. At StackOS the **revenue goes to cluster operators and individuals who stake their STACK tokens to govern the network.**

8

When other cloud providers do well business-wise, the shareholders gain. At StackOS the **people using the network profit.**

3 Protocol overview

StackOS is hyper-focused on providing a better cloud experience for developers to deploy and run their applications. The StackOS' decentralized cloud is tailored to deploying in minutes, making applications unstoppable, with lower cost, anonymously and more securely.

The StackOS team strives for the best UX making a codeless deployment of applications on the decentralized cloud possible. Page long guides on how to deploy or hiring expensive DevSecOps are history with StackOS.

Applications deployed on StackOS become unstoppable. In case of a DDoS attack, the beacon node limits the allowed bandwidth from the attacker's address.

The Ecosystem

There are various players in StackOS' ecosystem: Cluster operators, token holders, developers, and governance participants (General DAO & Node Authority):

1. Developers will be able to deploy applications on the decentralized cloud of StackOS.
2. The cloud consists of various cluster. When a developer wants to deploy s/he can choose on which cluster they want to deploy.
3. A cluster consists of a group of infrastructure nodes. The application deployed will run on one or more of these nodes / clusters.
4. Each cluster is maintained by a skilled DevSecOps team to guarantee the stability and quality of nodes.
5. Governance participants stake STACK in a pool and are able to govern by voting on platform matters . The number of tokens staked decides the type of governance participant they become: General DAO (voting power on protocol roadmap, X, Y) or Node Authority (who get additional voting power on infrastructure matters like burning rate, rewards percentage etc.). Node Authorities also get to participate in governance results in rewards with an APY and profit from cloud usage.

The Beacon Nodes

Part of the decentralization comes into play with the beacon nodes. These nodes automatically route application traffic between two or more clusters where the application is deployed, so in case of when one of the cluster operators experiences an outage or a hazard; applications continue to be supported by other operating clusters.

The Clusters Distribution

The other part that makes StackOS decentralized is that clusters are not necessarily run by the data centres or the central cloud providers. In fact, DevSecOps communities around the world can use their own private account on these cloud providers and data centres to run the StackOS decentralized cloud network. Thus in case one of the cluster operator's accounts gets banned or stopped, the affected DevSecOps team can launch a new cluster in another account pretty much instantly while continuing to support the StackOS' decentralized cloud. This would invalidate any special need for StackOS to partner with a cloud provider or a data centre to provide its decentralized cloud service.

StackOS' is designed to actively engage cloud providers and data centres to contribute to StackOS' open source technology, which will make it easier for DevSecOps engineers to run the clusters on their infrastructure and thereby increase their resource utilization. This puts StackOS in a very unique position, where it does not compete with the large cloud providers and data centers, but instead works alongside them to improve decentralization and their resource utilization. In the future community members will also be able to contribute their own hardware resources to the StackOS' decentralized cloud.

The Holy Grail

A key goal for StackOS is to have a vast network of developers running applications on StackOS benefitting from its unique USPs while rewarding supporters of the network who participate in governing and contributing to the protocol. ~ *Cloud of the people for the people by the people.*

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4 Interoperability

The interoperability of the platform with various chains plays a crucial role in creating a truly seamless experience for developers.

StackOS is making it easy for developers to deploy on StackOS, by enabling payments for compute resources through their preferred chain.
While the STACK token remains the fundamental token for the platform, developers will be able to pay via the Ethereum, BSC, and NEO chain and the currency they are using will be swapped in the back-end to $STACK via the chain's popular decentralized exchange.

More chains and cryptocurrencies will be added as the product matures.

5 The StackOS Ecosystem

StackOS is designed to be community-based at its core and at a later stage the protocol will also be governed by a DAO. From cluster operators, to cloud providers and data centres, to token holders and all the way to the developers - anybody can participate, contribute to the ecosystem while benefiting from it.

5.1 Cluster Operators

For true adoption of the decentralized cloud of StackOS, it is pivotal to be able to guarantee the quality of nodes. Enterprises will never deploy applications on a cloud if the quality of the nodes can not be guaranteed.

This is where StackOS introduces the cluster operator, they are an expert DevSecOps team that manages the cluster of nodes. They maintain the network and can scale the number of nodes in their cluster by opening accounts with different cloud providers like Amazon AWS, Google Cloud, or any other data centers.

The position of the cluster in the cluster selection list is determined by the score given by developers who have hosted their application for at least one month on a specific cluster.

A cluster operator earns when developers deploy and run applications on their clusters.

5.2 Token Holders

STACK token holders are able to provide liquidity, trade, or participate in yield generating programs as governance participants.

The STACK token is traded 24/7 on Uniswap and Pancakeswap, allowing you to stock up or liquidate at any given time

Add a pair of tokens to the liquidity pool and become a liquidity provider (LP). Enjoy LP rewards and earn fees each time another user is making a swap.

Early Backer Program

Participate in the Early Backer Program. We will open tier pools in which you can stake tokens and earn highly rewarding APY's. To join a tier pool you will need to buy an NFT. The revenue of the NFT goes to the team which will be used to attract skilled cluster operators to StackOS.

In the first phase, an NFT will give you access to stake in one of the tiers with a set amount of tokens for a good APY. In the second phase, once the tier pools close, the NFT will give you a lifelong boost in earnings from the governance pool, as long as it's staked.

Participate in governance

There are two governance types. The type you become depends on the number of tokens you stake in the govern pool. Help govern and vote for matters concerning the StackOS platform.

Type of governance participants:

1. General DAO
2. Node Authority

Governance participants earn (height of rewards depends on the type):

1. Annual yield
2. Profit from the usage of the nodes from all clusters

5.3 Developers

Developers enjoy easy, codeless deployment on a decentralized, anonymous and secure cloud. Either deploying their own applications or selling/buying applications on the StackOS App Store.

Skip the high costs and time wasted on set-ups and ongoing infrastructure maintenance. Simply use our codeless-based UI to quickly deploy your apps and test them on private testnets.

Add applications to the StackOS' App store and earn from their adoption. Turn your application into licensed products with NFT's and sell via resellers.

Developers will be able to vote on the performance of the cluster they deployed on. The votes determine the ranking of the cluster. The higher the ranking of the cluster the higher the chance that a developer will deploy on it.

5.4 Governance participants - DAO & Node Auth.

The vision of the StackOS team is that the protocol and its nodes will be governed by the community to obtain full decentralization. In the first stage, the current team will stay in control of development but STACK token holders will be able to become one of two governance types and govern on certain matters while earning great rewards. This is a prelude to the DAO which will be formed at a later stage.

Becoming a governance participant

Everyone in the StackOS community who holds and stakes STACK tokens can become one of two governance types! The govern pool will be opened in which people can stake their STACK making them eligible to govern the StackOS network. The number of tokens staked will determine the governance type and thus the height of rewards.

Governance types & tasks

There are two types of governance types in the StackOS ecosystem.
The general DAO and the Node Authority. The general DAO will be able to vote on matters which are not related to the protocol but rather on marketing,
project funding, events, branding, and launch of features. Node Authority will have a higher influence as they vote on network matters like the burning rate per resource purchase.

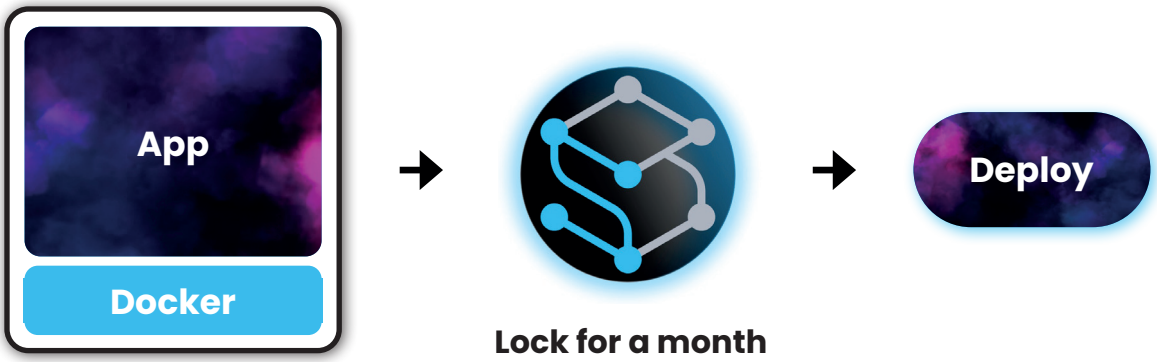
Rewards for a governance participant

The rewards model for participants is very attractive. In return for governing, both governance types will earn:
1. A good APY on their staked STACK and
2. A profit share from the usage of the decentralized cloud of StackOS.

People who are Node Authority will receive a higher reward compared to the node apprentice.

6 Deployment process

The StackOS team has worked for three years to make deploying an application on StackOS extremely simple; No need to hire expensive DevSecOps to manage infrastructure and wait for weeks to prepare the application. StackOS is completely codeless, just containerize your application, lock $STACK tokens for a month of utilization for some compute resources, and deploy, literally in minutes!



7 Token Utility

The STACK token is intertwined in the StackOS platform. It is used as the payment currency for cloud resources, and the App Store and can be staked in the Liquidity pool, govern pool or Early Backer Pool.

Token burn

With every resource payment, a piece of the STACK tokens will be burned. In case a cluster operator fails part of the tokens will be burned and of that part, some tokens will be distributed to other, non-failing cluster operators.

Staking

The people taking part in governance are one of the fundamental pillars of the StackOS ecosystem. People who stake their STACK tokens in the governance pool will be able able to govern and earn from an APY and part of the profits from the usage of the cloud.

A cluster operator maintains a group of nodes and earns when applications are being deployed on his cluster. In order to start a cluster, a significant number of tokens have to be staked.

In the Early Backer Program, community members will have a chance to support the StackOS team in finding skilled cluster operators. They can do this by buying an NFT. In return, this NFT gives them access to stake a set amount of tokens in a highly rewarding staking pool.

Liquidity pool

USDT-STACK: The STACK tokens will be locked in the liquidity pool to allow the infrastructure protocol to convert STACK tokens to USDT that are needed for payment for cloud usage.

Alternative Pools: There will be an active pool for all alternative currencies used by the developer to convert into STACK tokens that get locked in for payments.

Payments

Payments for Decentralized Infrastructure Usage: For using the Decentralized Cloud, developers will have to lock a month-long amount of their STACK tokens on the Smart Contract. These STACK tokens are then partially converted USDT when they are being sent to the Infrastructure Node and Beacon Node provides for payments. As the number of applications running on StackOS increases, the total number of tokens locked in the smart contract also increases, which greatly reduces the circulating supply.

Marketplace License Fee: Some marketplace applications will allow users to deploy apps in a single click, some applications here could be licensed. Payments for these will be made in STACK tokens.

8 Partnerships

neo

BUTTERFLY PROTOCOL

AU21 CAPITAL

Gather

UniFarm by OroPocket

Saito

BSCPad

polygon

MOONWHALE

MurAll

THREE M CAPITAL

RAZE Network

FOLLOW [THE] SEED

MASTER VENTURES

ZOKYO.

x21

MAGNUS CAPITAL

PrivaSeed Ventures

UNISWAP

PROTOCOL

panther.

ICO Pantera

LVT CAPITAL

ALPHABIT

Chainlink

SPARK DIGITAL CAPITAL

gravity

matter

rarestone CAPITAL

PAID IGNITION

NGC ventures

A195 Capital

22-51 WALL ST NINJA

The Unstoppable Finance Suite

PINKNODE

CoinMarketCap

CoinGecko

COINTELEGRAPH

StackOS

Be part of the (decentralized) cloud revolution!

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