

SINOVATE Litepaper

Introducing Blockchain dCloud and Innovations

“Freedom for Data, Freedom for Anything”

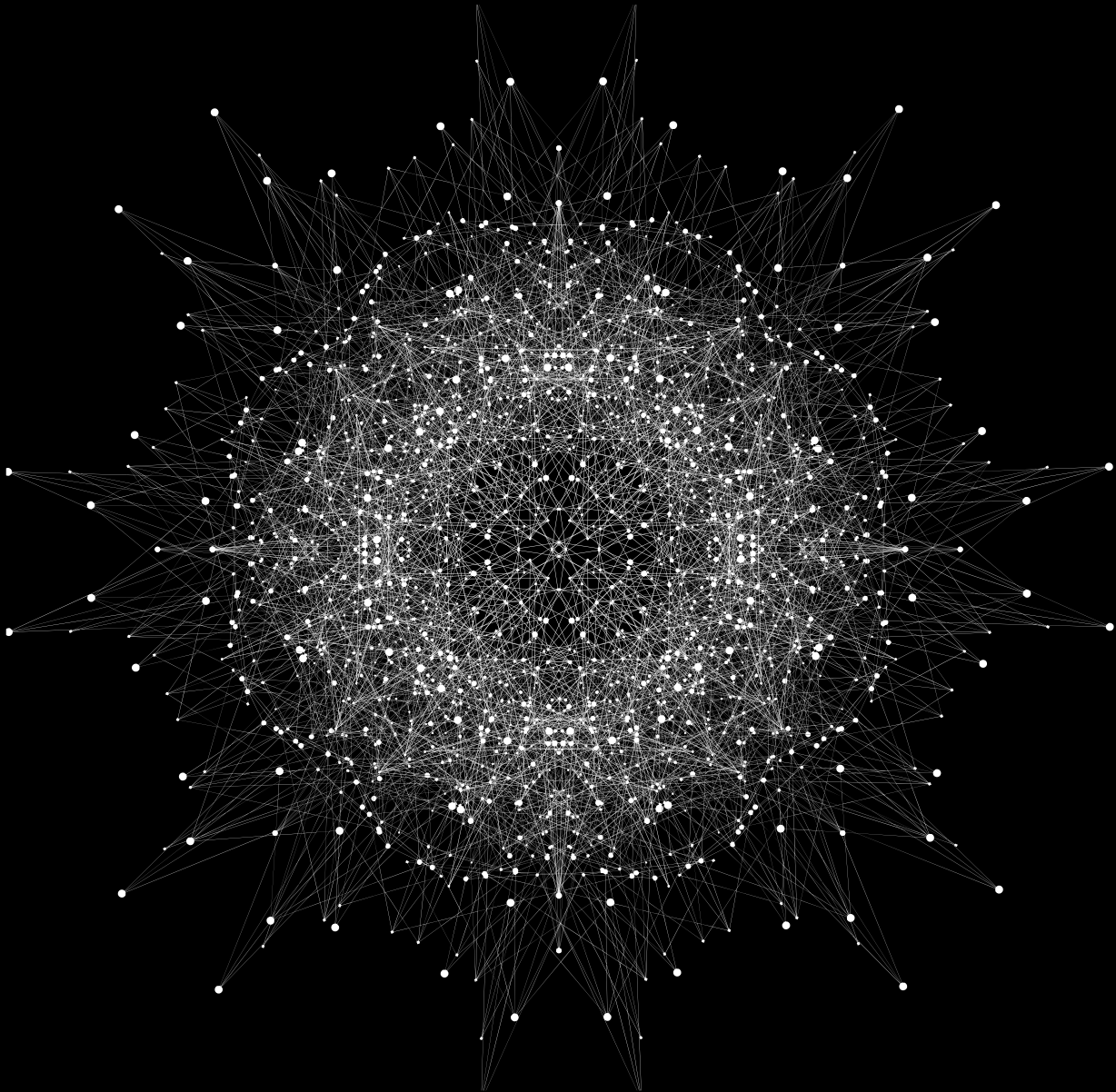
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THE BIG “DATA” PROBLEM

Bitcoin changed the way we looked at the monetary system and managed this by using Blockchain technology. Blockchain solved trust by malicious actors and allowed many use cases that are causing problems in everyday lives. Data privacy is one of the significant issues.

Central authorities control data just like they manage money. In this digitalized world, data has become the most valuable property.



Privacy

Cloud: Centralized cloud storage exposes data to privacy leaks and data breaches. The management can control, monitor, censor, or provide data to third parties. The stored data could be lost or modified.

dCloud: Blockchain-based decentralized cloud storage is secure from potential data loss and privacy issues due to its nature of encrypted files from the source.

SINOVATE IDS Privacy: By using view keys, SINOVATE dCloud data is hidden and private by default. Releasing the view key removes this privacy component, making dCloud a private system with optional public data.



Security

Cloud: Centralized storage servers gather in one or several places to reduce costs, and on the occasion of a power interruption or other malfunction, many related services often fail or even have the danger of losing the data forever. Additionally, a data centre can be easily located in the network and is easier to target for hackers.

dCloud: On dCloud platforms based on Blockchain technology, the files are distributed between many nodes worldwide. It is impracticable to hack or find out which distributed computers store which spread files.

SINOVATE IDS Security: Using a novel best-of-n algorithm, data on the SINOVATE dCloud has unprecedented security and redundancy without sacrificing speed.

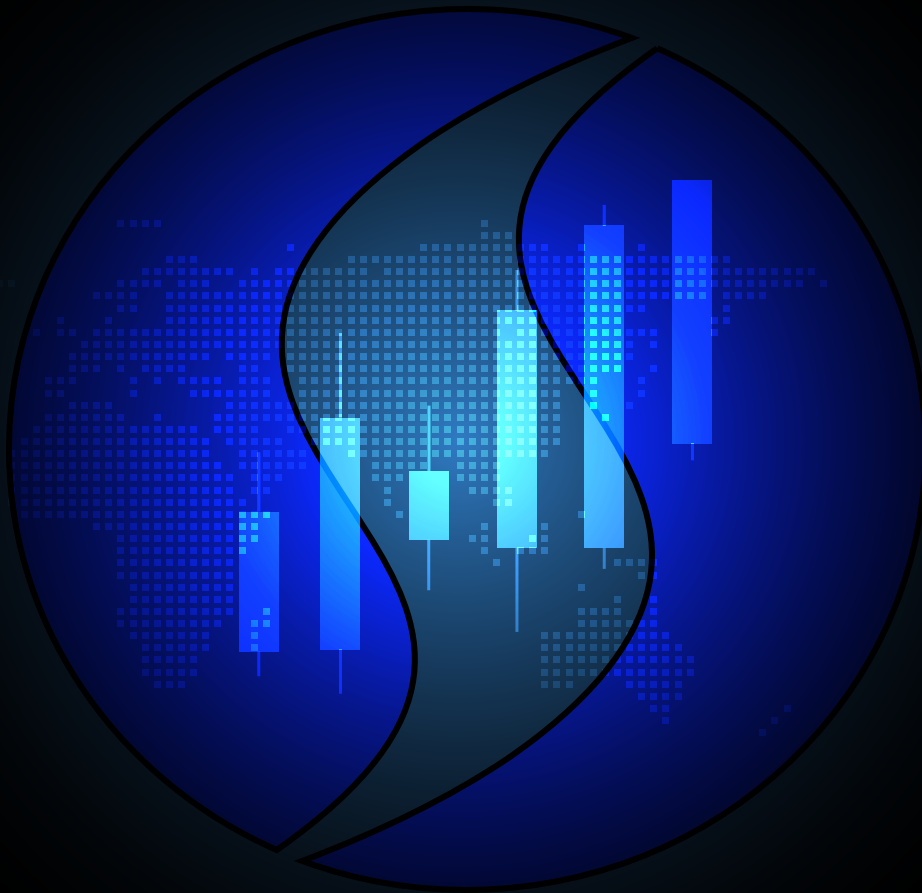


Cost

Cloud: The costs of centralized storage are incredibly high; these include employee salaries, accounting expenses, legal charges, administration duties, and data centre rents. Additionally, the cost of data migration between different centralized cloud storage platforms is high, and the cybersecurity measures cannot entirely prevent network hacks.

dCloud: The decentralization reduces the deployment cost of data storage servers and achieves lower rent costs. All the decentralized cloud platforms have a considerably lower price than the centralized solutions.

SINOVATE IDS Cost: Thanks to Proof-of-Burn (PoB) incentives, the network rewards Infinity Nodes for their basic service and creates a demand-driven economy where node owners have an incentive towards providing a better, cheaper, and more stable service when compared to competitors.



Decentralization

Cloud: Centralized cloud storage is the hub of stored files, data, and databases administered within computing servers over a network. The owner of the centralized storage provider often has complete control over the stored data.

dCloud: Not all Blockchain-based distributed file storage providers are fully decentralized. Some of them do not have a dedicated Blockchain. Most of them rely on centralized nodes for stability and redundancy.

SINOVATE IDS Decentralization: Infinity Nodes and Hybrid Proof-of-Work (PoW) and Proof-of-Stake (PoS) consensus ensure high mining and staking participation rates; there are no entry barriers, anybody can set a node up, mine or stake in the SINOVATE Blockchain, and everyone contributes to the network security thanks to the usage of these hybrid proofs.

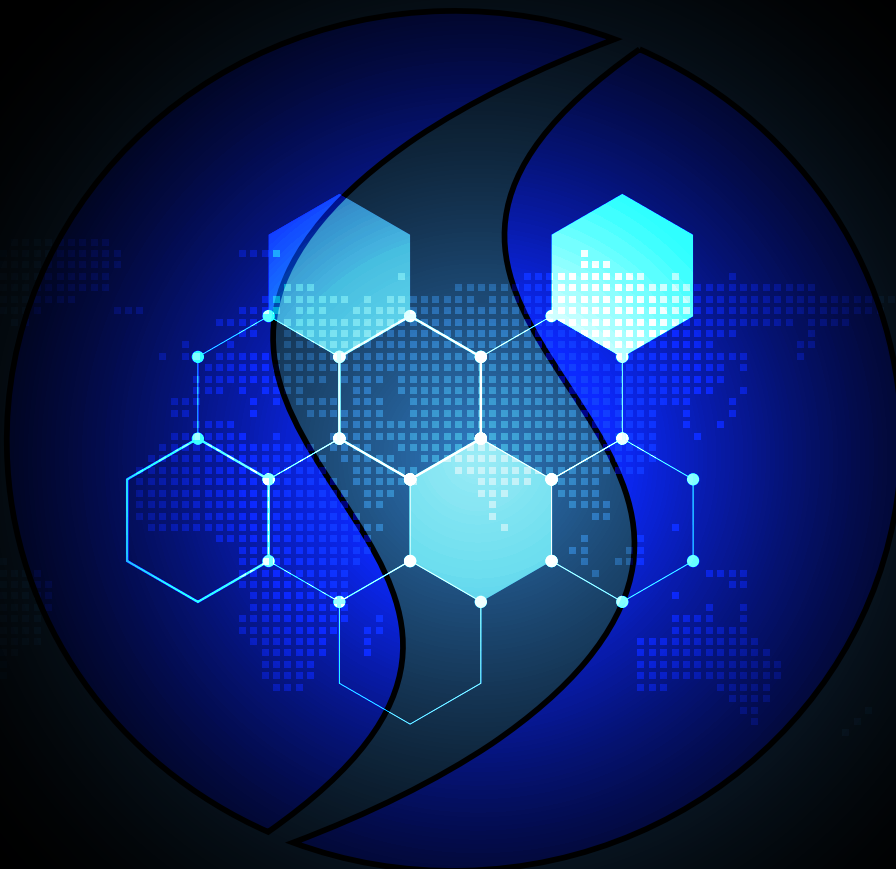


Stability

Cloud: Cloud storage platforms do their best to provide stable performance, but most cloud providers' achievements are regularly problematic due to sharing physical resources, such as network, memory, disk, CPUs, with many different users and requirements. They can not guarantee 100% uptime. Furthermore, users cannot retrieve their data where the data centres are temporarily offline for maintenance.

dCloud: Most of the decentralized cloud storage platforms have stability issues due to early contract cancellations, network and electricity downtimes of connected home users.

SINOVATE IDS Stability: The limited 12-month lifespan of Infinity Nodes makes running a node the highest possible network responsibility. A good service quality for SINOVATE dCloud storage becomes a requirement. The economic incentive profiting from the initial burn process requires the node to be up and running without any hiccups. A design like this ensures that all node participants can give the users the best possible service not to damage their own initial investment. Unlike other masternode or cloud storage platforms, there is no cancelling of nodes before the maturity date, meaning that all nodes must remain online for 12 months, which guarantees full redundancy, stability, speed and sustainability.



Speed

Cloud: File transfer speeds are critical to cloud storage, especially when dealing with large files. Even though there are limitations of centralized cloud storage, it still has considerably faster speeds than the current decentralized cloud platforms.

dCloud: Network speed is the most significant threshold dCloud services face due to requirements of multiple backups, contract cancellations, split files, slow database and network downtime.

SINOVATE IDS Speed: Each Infinity Node will hold a deterministically chosen copy of each data piece, split across a predetermined number of network node participants using an economic-incentive-based novel redundancy algorithm. This algorithmic redundancy enables SINOVATE dCloud to require fewer backups and, subsequently, a more significant amount of cloud storage space with ultra-high-speed cloud transactions. The standardization of a Blockchain-based file transfer protocol (bFTP), which all nodes support, also opens up the scenario of data-automation, automatic data storage and data-based decentralized applications (or dApps) for speeds as fast as centralized cloud services.



Overview

SINOVATE is a state of the art innovative public Blockchain focused on decentralized cloud solutions to overcome scalability, decentralization, and security challenges. We are ready to adapt, evolve, and sustain our relevance in a continuously changing environment.

The goal is to launch innovations combined with a user-friendly platform to integrate into daily life.

Our team is committed to transparency, accountability, and honesty.

Combining both the PoW chain security and PoS chain security through the usage of hybrid proofs and PoB for Infinity Node notarization as an additional Byzantine-Fault-Tolerant (BFT) chain-based algorithm gives the SINOVATE Blockchain the highest, academically proven level of on-chain security.

IDS provides high-speed decentralized cloud storage. Leveraging thousands of Infinity Nodes that don't require high user fees and enforce network-wide security protocols give users power and control over their private data.

"CODE IS LAW."

Lawrence Lessig

DECENTRALIZED CLOUD COMPARISON CHART

IDS dCLOUD FEATURES

SINOVATE Private
Networking (SPN)

Hybrid Pow and
Pos Consensus


Blockchain Mail
Services (B'Mail)

Collateralized Service Nodes
(Deterministic Infinity Nodes)

bFTP

dCLOUD BLOCKCHAIN DIFFERENCES

SINOVATE IDS dCLOUD vs COMPETITION

BLOCKCHAIN	NOTES	Inflation Control (Proof-Of-Burn)	Dedicated Blockchain	dCloud Upload Speed	Contract Length
 SINOVATE	Fastest dCloud Speed	✓	✓	✓✓✓	✓✓✓
SIA	Proof-Of- Work and Centralized ASICS		✓	✓	✓
STORJ	Ethereum ERC-20 Token			✓	✓
FILECOIN	Slow dCloud Speeds		✓	✓	✓
BITTORRENT	TRON TRC-20 Token			✓	✓
ARWEAVE	Third Party Nodes			✓	✓
SAFE	Contract Stability Issues			✓	✓
DFINITY	Centralized			✓	✓
AKASH	Cosmos Token			✓	✓

Consensus

Combining a novel and custom fourth-generation Proof-of-Stake (PoS4) with Proof-of-Work (PoW) consensus ensures an algorithm which combines prohibitive attack costs, therefore providing unbreakable network security.

Proof-of-Burn Mechanism

Infinity Node uses the PoB mechanism to ensure that all SIN coins used for set up get burnt immutably and recorded as unspendable. This process helps increase the decentralized network's stability and further secures the network by deterring bad actors who may attempt to carry out malicious activities. Every node holder commits to support the network's longevity by locking and burning SIN coins in an Infinity Node for 12-months.

Not doing so results in the loss of rewards from the Blockchain and potential ROI.

This stability requirement ensures the network's endurance, limits the circulating supply's coins in more significant amounts, and reduces the selling pressure, which is not the case with traditional masternodes that can be liquidated and sold at any time.



Infinity Nodes

Infinity Nodes are a first of its kind of burn-collateralized nodes that receive monetary incentives for running their hardware and hosting files. They are the backbone of the IDS network.

Similar to how other Blockchains work, the main SINOVATE chain relies upon nodes dispersed across the globe without concern for borders or jurisdiction. Each node hosts a copy of the main SIN Blockchain.

InfinityNodes use a custom deterministic reward algorithm secured by Schnorr signatures for node validation. They provide bespoke functions such as controlling inflation and storing data that regular nodes cannot deliver.

- 1) Schnorr based Multi-Signature signing scheme (MuSig)
- 2) Provably fair and openly verifiable fully deterministic node rewards
- 3) Inflation control with a burn-to-run node ecosystem
- 4) Fully on-chain node registration and servicing
- 5) Decentralized Autonomous Organisation (DAO) with node democracy
- 6) Node incentives ensure sustainability

NEXT GENERATION BURN TO RUN SERVICE NODES.

Blockchain-based File Transfer Protocol (bFTP)

A novel protocol for interacting with IDS:

We built the IDS network around deterministic Infinity Nodes, a fundamental shift in the network, from a Legacy Masternodes-like architecture (DASH, pre-DIP0003) to a new consensus system.

Using Schnorr signatures, we can reach levels of on-chain security and speed never seen before. This is important as nodes are required to be available at all time for future IDS dCloud applications, and enforcing new checks on-chain, openly and verifiably by all, is the basis of a decentralized system.

With bFTP, we plan on extending Infinity Nodes capabilities so that each becomes an open datapoint for storage. The procedure for this will include a fee for allocated space paid by the user for the hosting period. Fees are burnt, and a signed message from the burn address is used for authenticating over bFTP. Once the node has verified how much SIN the user has burnt, the bFTP protocol allows pushing data directly to the node. At this point, the stored information is now safely available on an Infinity Node.

For redundancy, Infinity Nodes organize and distribute the data among themselves, following a deterministic “score” system based on the hash of the data and the node’s public key.

To retrieve data from IDS, a user re-authenticates over bFTP to any of the nodes holding a redundant copy of the data and then the deterministic scoring algorithm quickly locates the data.

DISTRIBUTED FILES BUT NOT SPLIT FOR HIGH SPEED.

Decentralized Cloud 3.0

Incorruptible Data Storage (IDS): The base layer for all SIN Blockchain-based storage solutions.

Incorruptible Data Storage (IDS) is an innovative decentralized cloud and private network mechanism for sending, storing, and verifying encrypted files. It allows users to store files for future retrieval and to send files privately over peer-to-peer. It also allows private messaging between users with the SIN messenger application to guarantee security without storing data on any server.

- Decentralized Cloud 3.0
- Blockchain-Mail and Proof-of-Integrity
- SINOVATE Private Networking (SPN) Unlimited Big Data Solutions
- SINCORD Messenger Direct Messaging
- bFTP, Blockchain-based File Transfer Protocol



Blockchain Mail

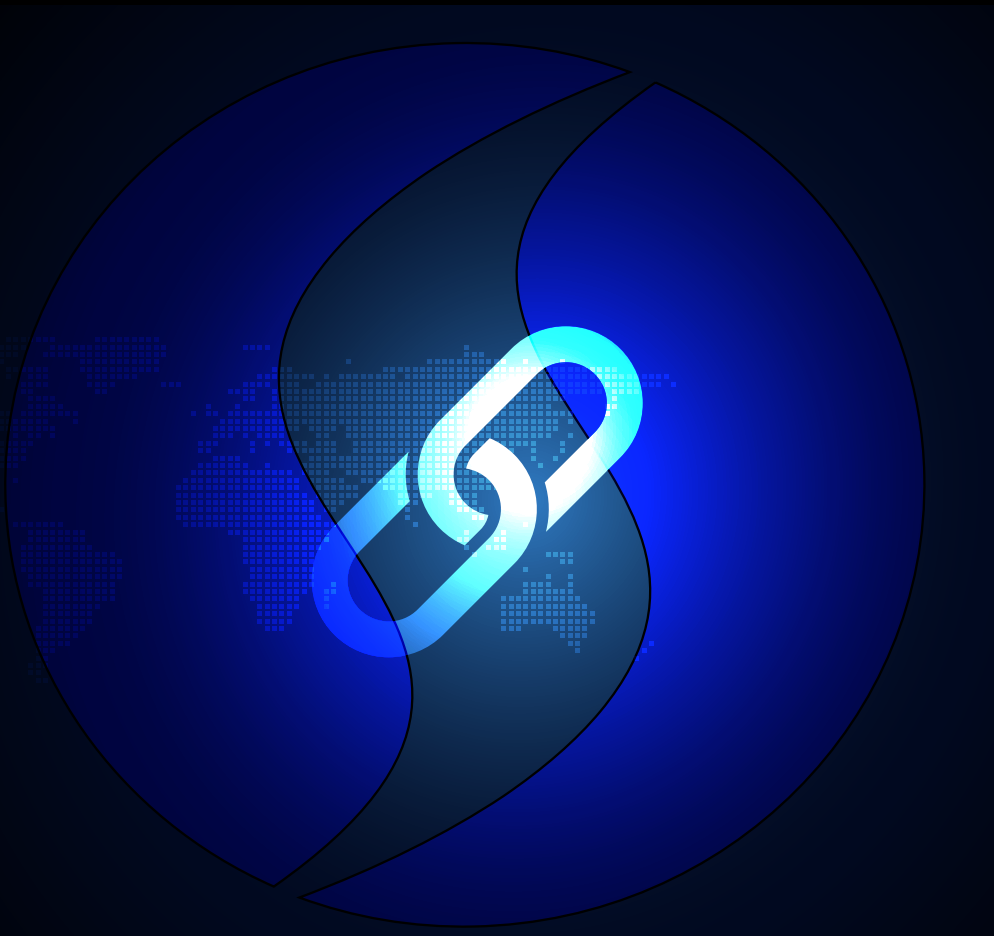
B'Mail allows users to store digital documentation or data, timestamped with metadata and secured by the incorruptible SIN Blockchain.

A local copy of the document is available to compare with that stored in the Blockchain at any time. SINOVATE cryptography and the Blockchain ensures the data stored is securely stored and verified.

Besides sending data, the SINOVATE network allows users to store data for specific time limits.

All randomly chosen highest rank Infinity Nodes continue to verify the stored data for the specified time limit and commit the network fee.

Your DATA, Your PRIVACY!



Proof-of-Integrity

The IDS feature makes it possible for users to prove that data's integrity and send and store data files on the Blockchain. Private individuals, corporations, and governments need to be sure that the information they receive is genuine.



InfiniteChain

Completely separate from the main SINOVATE Blockchain, the InfiniteChain will be a new Blockchain built on the BIG Infinity Node Layer (BIL), which uses the PoB and PoS consensus mechanisms. All blocks created by BIL are transferred and relayed to all nodes of the network. Users can take advantage of high speeds, flexibility, and liquidity.

Both the main SIN Blockchain and SIN InfiniteChain are closely linked. InfiniteChain provides additional functionality for users to create their customized asset tokens. An asset token can then be associated with a specific valued data file or physical good, effectively monetizing the proof of ownership of that data or good.

InfiniteChain will open the possibilities of:

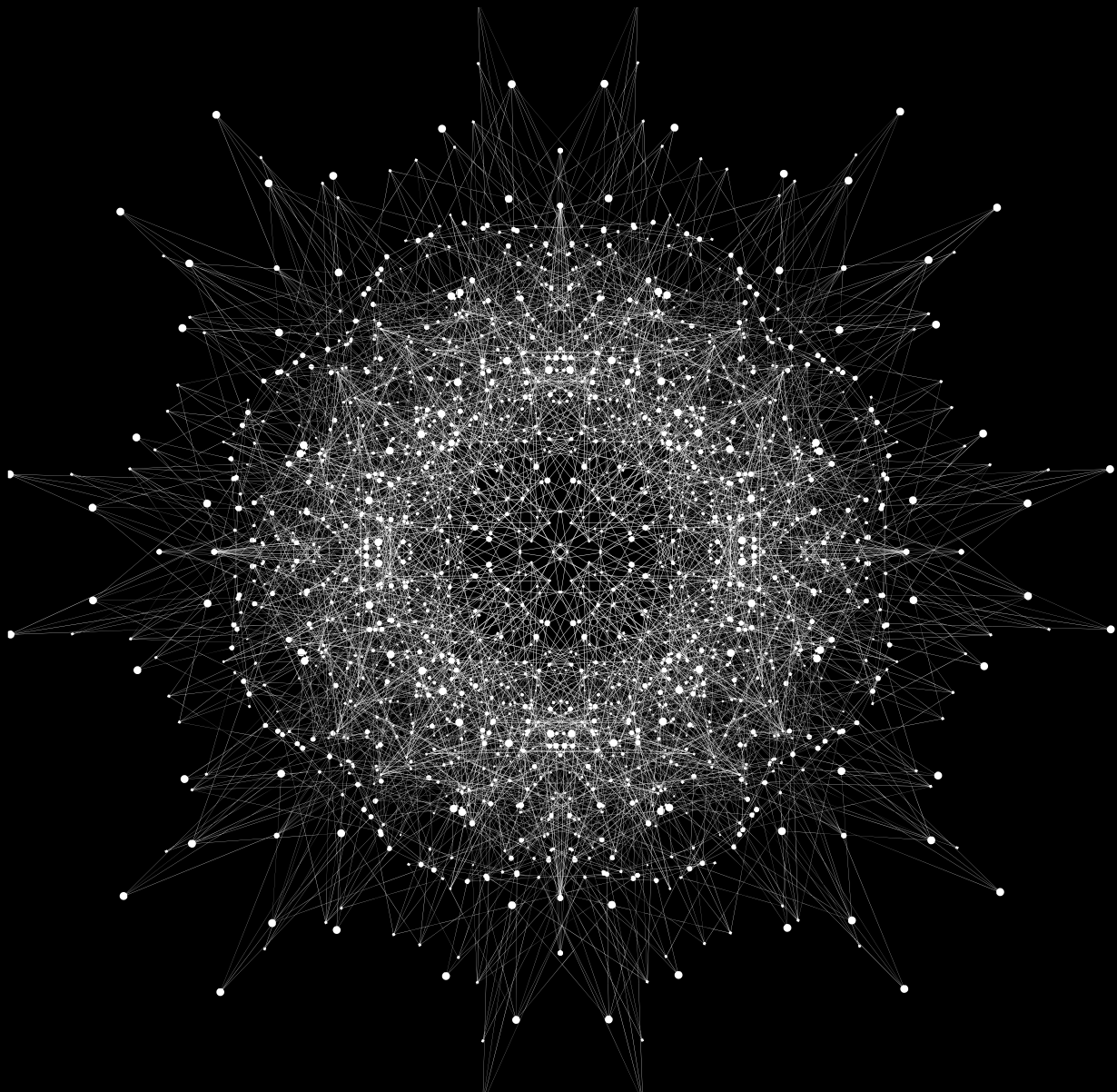
- Asset creation
- Collateral side blockchains
- Proof-of-Inheritance

**If Blockchain is a book,
InfiniteChain is a library!**

Asset Creation

Blockchain technology was initially designed to improve how financial transactions are verified and recorded. Over time, the use cases have expanded. It is conceivable to leverage Blockchain technology to tokenize physical goods by creating token assets. The built assets provide valuable tools for seamlessly exchanging and storing legal ownership of goods on an immutable distributed ledger. Therefore, each tokenized asset will have an associated value depending on what it represents in the real-world.

Tokenized assets are an excellent method by which to prove who owns the corresponding physical good. It is easy to transfer the ownership peer-to-peer without future disputes or the worry of records becoming altered. It offers potential new trading markets, which were not possible with traditional centralized technology or infrastructure.



Cryptonomics

As applied to Blockchain technology, cryptocurrencies serve to represent something of value in the real-world. It could be tangible goods, services, data, information, company shares, voting rights, and so on. Cryptonomics is a term formed by merging the words 'crypto' and 'economics'. It is for studying the quality standard of a cryptocurrency to determine whether it has underlying value, a high potential adoption rate, investor interest, and long-term sustainability. Put, it helps potential coin holders decide what will impact that coin's value, real-world utility, and longevity.

When studying the quality standard of a cryptocurrency, potential participants or investors must consider different aspects of its structure or model. It is vital to investigate factors such as coin allocation, business model, governance, team, and community.

“The more people in the network, the more value the network will have.”

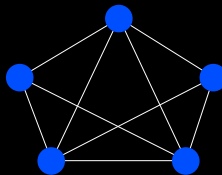
Metcalfe's law theory



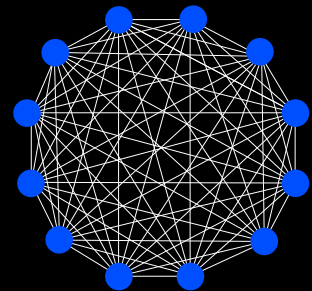
SINOVATE Infinity Nodes Network Effect



2 Nodes
1 Connection



5 Nodes
10 Connections



12 Nodes
66 Connections

Allocation

Allocation refers to how cryptocurrencies are distributed immediately after the launch of a Blockchain. It also encompasses how newly generated coins are rewarded and allocated during the lifespan of that Blockchain. The community needs to be transparently informed about all the details. For instance, some core teams hold custody over a development and marketing fund.

SINOVATE started in 2018 with no pre-mine fairly launched Blockchain, which allowed everyone to be part of the project.

Allocations of SIN coins are via PoW mining, staking, Infinity Nodes, and the development & marketing fund. SINOVATE is devoted to complete transparency regarding the development & marketing funds' spending with monthly financial reports. Treasury funds ensure that the project is self-funded adequately in sustainable code development, prolonged marketing, and other beneficial operational activities.

No ICO, No PRE-MINE

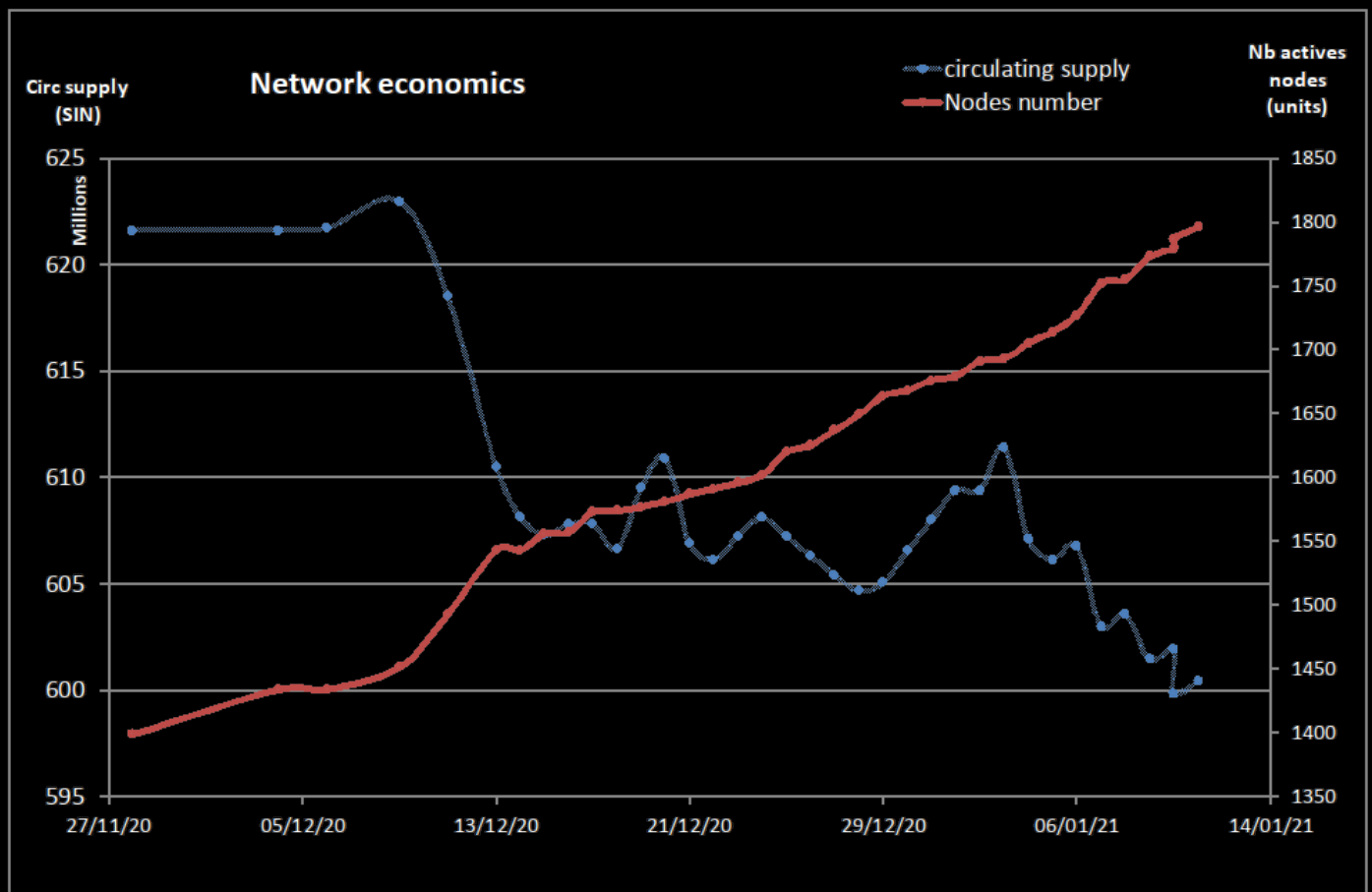
SIN System Economy (SSE)

As the circulating SIN coin supply decreases, the selling pressure gets weaker on the open trading markets. SIN system economy's utmost goal is fighting emissions while incentivizing the users.

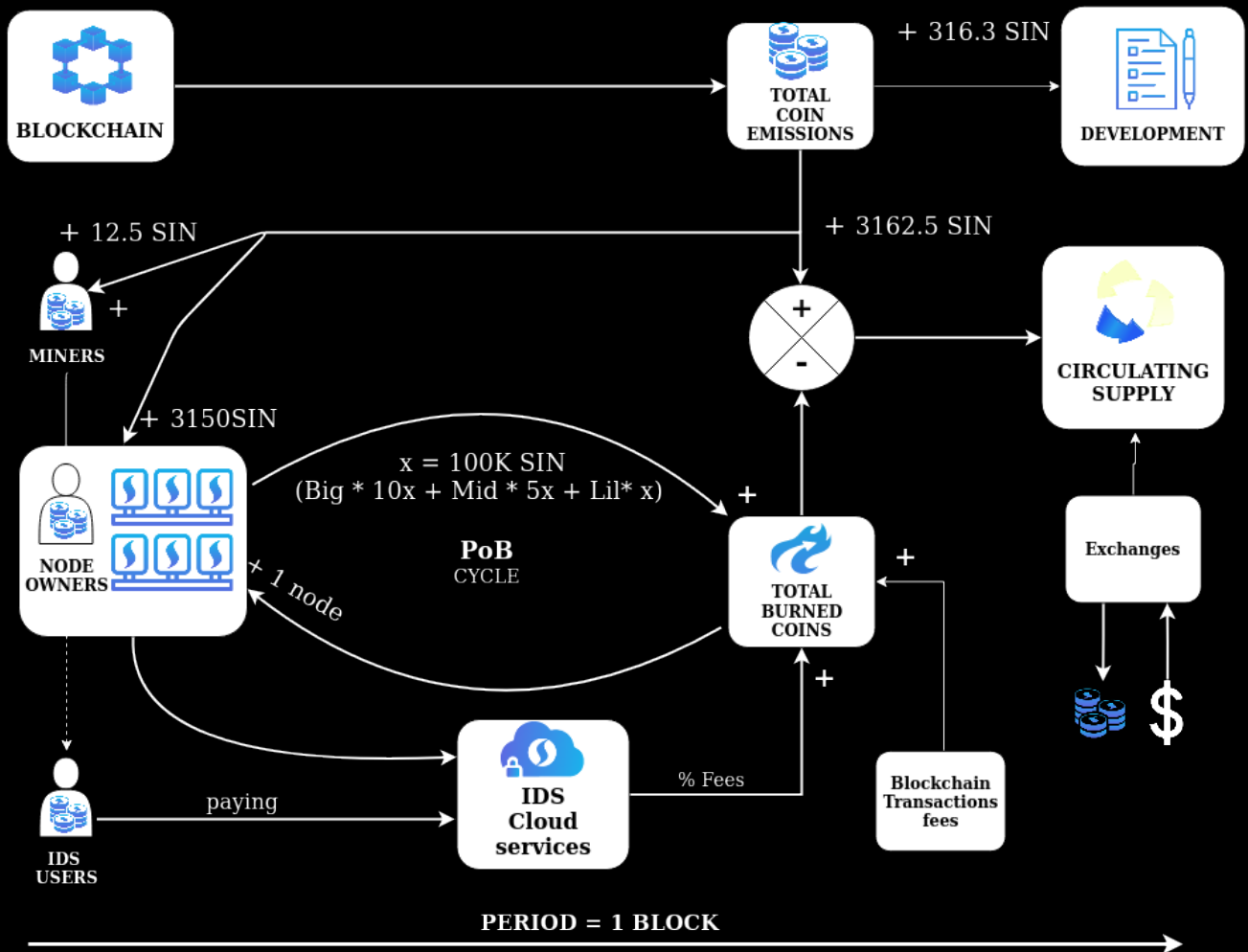
The economic system consists of:

- Burning all the transaction fees in the network.
- Burning all the governance proposals and voting fees.
- Burning the collateral coins of the Infinity Nodes.
- Burning all the decentralized cloud fees.

As a result, the instant circulating supply depends on network equilibrium between coin emissions and load the ecosystem. More network utilization means less circulating supply and vice versa, which means growth equal scarcity on SIN coins. Here is an example of deflationist phenomenon among network while filling up in nodes:



SINOVATE SYSTEM ECONOMY



The Self Regulated incentive System



DEMAND

= Infinity Nodes Burned + IDS fees Burn flow
+ standard Tx burn flow



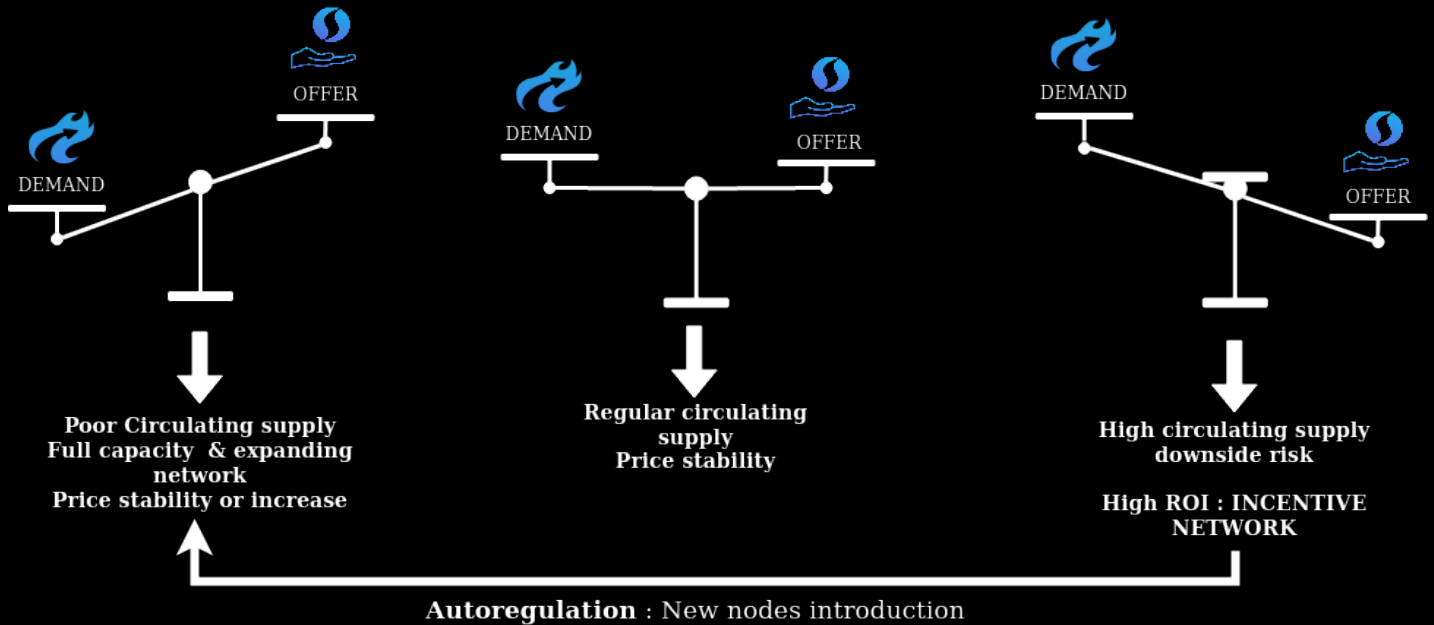
OFFER

= Coin emissions
(Infinity Nodes & Mining & Development)

Tend to
DEFLATION

EQUITY

Tend to
INFLATION



Another thing to look at in this financial system is the network strength directly related to the economic aspect.

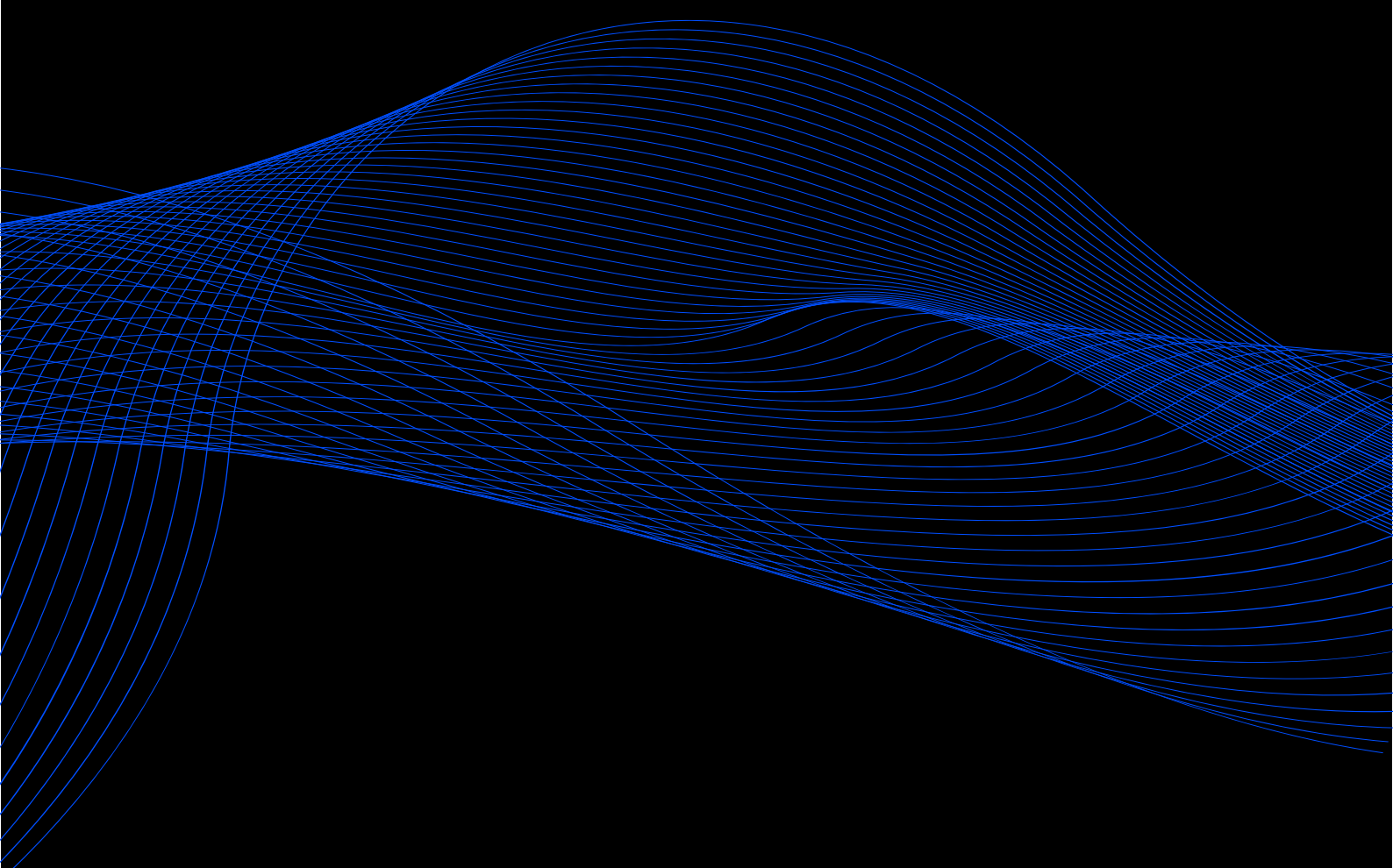
Since Infinity nodes reward rates depend on the number of active ones among the network, the model ensures a minimal decent nodes count based on an incentive compromise leading to an autoregulation phenomenon.

The end goal is exceptional stability favouring the platform strength and growth for dCloud solutions & services in a long term way.

Governance

Decentralized governance is the future of any successful Blockchain project. SINOVATE believes that Blockchain is ubiquitous in the underlying infrastructure and services in everyday life. Revolving Sovereignty Votes (RSV) enhanced e-governance is designed to put power in users' hands with yearly revolving votes.

SINOVATE is an actual Decentralized Autonomous Organization (DAO) with no pre-mine, and the Infinity Node owners' votes rule all governance decisions.



Community

Simply put, a Blockchain project would be nothing without a community. It is considered one of the most critical aspects that adds value to a Blockchain. Each member of a community, if she/he chooses, has the opportunity to constructively suggest improvements and influence the direction in which progress proceeds.

SINOVATE has a thriving and enthusiastic community consisting of many people eager to see the project innovate. In the best interests of the whole project, the community is respected, listened to, and encouraged to add value to the SINOVATE network collaboratively. Ultimately, they are the users of the services and products on offer.

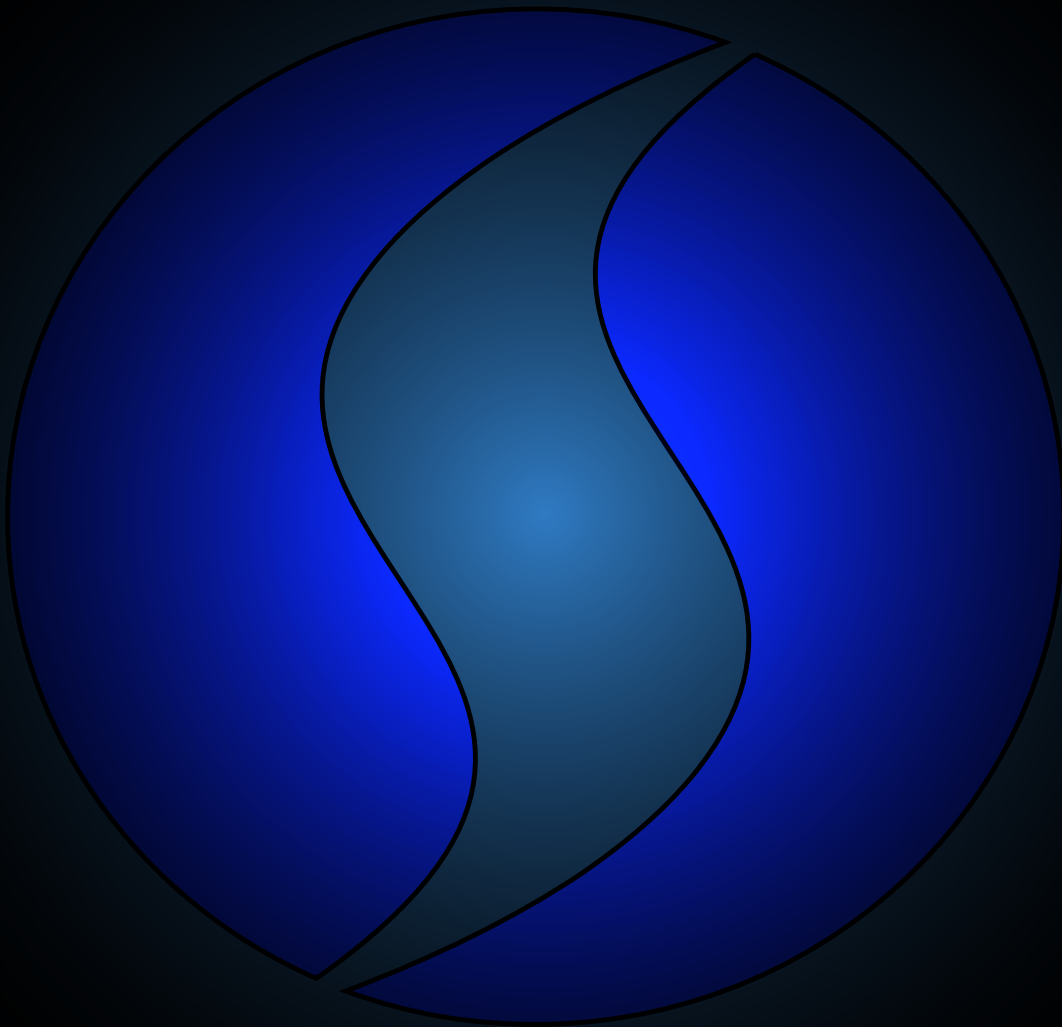


About SINOVATE

The SINOVATE team consists of experienced, talented, and passionate people who wish to add value to the fully decentralized Blockchain network. Founded by open-source decentralization fanatics, the team has grown to include a broad spectrum of abilities and perspectives. There is a shared ethos to achieve goals as set out in the roadmap.

We are members, developers, investors!

The INNOVATION Team



Follow

Join, contribute and make a difference!

To effectively communicate the project's vision and scope, SINOVATE leverages all well known social media channels. They help immensely keep the growing community informed and engaged with code development, business, and other operational activities. The SINOVATE team actively uses all social media platforms to establish amicable and transparent relationships with the community inside and outside the Blockchain technology space.

