Authentik Studios: End-to-End NFT Solutions for Both Creators and Collectors

ABSTRACT

We provide end to end NFT solutions for both collectors and creators. Our flagship product, SILO, is a device that is not only a digital display for presenting users' NFT collection, but also serves as a storage node in our private IPFS SILO network. We issue SILO Coin to incentivize users to provide secure storage for NFT metadata in the network.

Introduction

Authentik is a gathering of the minds from the blockchain, entertainment, and manufacturing industries, who have come together to bring top-tier exclusive content and NFT technology to audiences around the world.

Our flagship product, SILO, brings NFTs to life by allowing mainstream audiences to show off their NFT collections from the comfort of their homes. SILO is a digital frame that features state-of-the-art technology in order to revolutionize the presentation of NFTs, and bridge the gap between traditional and digital art to provide consumers with a tangible sense of ownership. Our mission is to provide solutions for both artists and consumers to seamlessly interact with the NFT marketplace.

Building on top of the SILO hardware, we offer a semi-private decentralized storage network specific for NFT metadata. The network emphasizes privacy, security, encryption, and immutability. Every SILO hardware not only serves as a digital display, but also as a storage node. Metadata will be secure and private in our network.

Another aspect of our current venture is assisting both institutions and independent parties in creating their own NFTs. We utilize our strong connections in the blockchain industry to assist NFT owners in the promotion and sale of their NFTs.

NFT Storage Pain Points

For high end art, the source files are priceless. Both the current IPFS and decentralized storage options are not built to meet the security level needed to protect the original source files of these visual or audio files. Current solutions such as Google Drive, AWS, native IPFS, and BitTorrent are not secure ways of storing the metadata for three main reasons:

1. Impermanence: The server can go down or offline, making it hard to find the metadata (unless it was mirrored by an NFT index like OpenSea).
2. Mutability: The developer can modify the metadata to something a collector does not expect.
3. Privacy: The traditional IPFS solutions are less private. The metadata could be accessed by others besides the owners.

SILO Network

The metadata for high end art needs to be private and secure. Rather than hosting the source files on any centralized storage or public chain, Authentik is storing all of the associated metadata on the network majorly consisting of SILO hardware.

SILO Network works as a private and incentivized layer on top of IPFS. IPFS has proven the effectiveness of content-addressing to undertake NFT metadata's security issues. Leveraging the existing IPFS architecture, SILO Network is a private IPFS network with four differentiating features:

1. Privacy: As a Private IPFS network, SILO network gains full protection from public monitoring. All of the source files will be only accessible by internal nodes with verifiable SILO device identification.
2. Encryption: SILO Network will implement both transport encryption and content encryption for additional security. Only the owner of NFT will have the private key to decrypt the NFT source file.
3. Compression: Most of the NFT metadata are picture, video or audio files. SILO will implement tailored lossless compression algorithms targeting these files to reduce the storage footprint.
4. Redundancy: SILO Network employs erasure-coding algorithm with 17+3 configuration. Each file will be split into 17 segments and then add 3 parity segments before uploading to the network. It can support up to three simultaneous disk failures, at the cost of parity overhead less than 18%.

SILO Network gives copyright holders the option to make NFT transactions without the need to expose source files onto any public network. The metadata is stored locally in the SILO device, which acts as a storage node, while the proof of authenticity is stored and validated on the chain. Each SILO has a unique device ID that will be used for proof. When the proof of that device number matches the NFT ID, the Silo Network then publishes that proof on chain, where it is then verified by a smart contract. The transaction data on the NFTs and its corresponding SILO metadata changes will all be refreshed on the public blockchains after each transaction.

SILO Network rewards miners for providing storage. A proof mechanism is needed to ensure no malicious node is taking advantage of the network. SILO network employs both Proof of Replication and Proof of Spacetime to verify storage provided by miners is valid at the time of challenge and also over a period of time.
- Proof of Replication(PoRep): A PoRep process permits an efficient prover P to persuade a verifier V that P is keeping a replica R, a physical individual copy of data D, distinct from P. A PoRep protocol is distinguished by a tuple of polynomial-time algorithms (Setup, Prove, Verify)

- Proof of Spacetime(PoSt): A PoSt system allows an efficient prover P to persuade a verifier V that P is collecting data D for a period of time.

Through these two proofs, the SILO network will establish rule and order, and minimize malicious actions. Miners will put down a small deposit when taking the storage request, and will get penalized if they can't prove or miss consecutive proving deadlines.
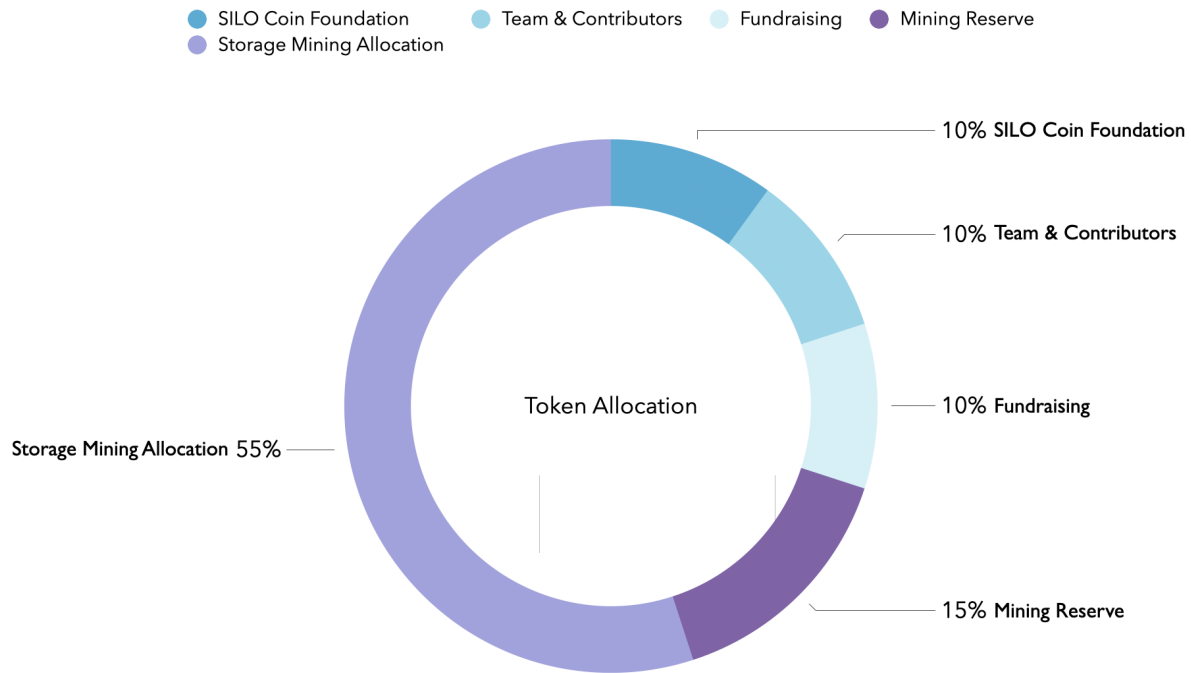
SILO Coin

SILO Network runs on a blockchain with a native protocol token called SILO Coin. Participants within the SILO Network are incentivized to provide storage space for the network through the disbursement of SILO Coin. Conversely, clients utilize SILO Coin to encourage miners to store or distribute data. As with Bitcoin, miners compete to mine blocks with sizable rewards. With SILO Coin, the mining power is proportional to active storage, which provides a beneficial service directly to clients. The robustness of the SILO Network is achieved through the replication and disbursement of content. Through this process, the SILO network will detect and repair replica failures.

Token Economy

The distribution of SILO coin's token is broken down as follows:
A maximum of 2,000,000,000 SILO Coins will be created, which are referred to as the SILO_MAX. Of the SILO Coin genesis block allocation, 10% of SILO_MAX is allocated for fundraising. 10% is allocated to the SILO Coin Foundation and 10% for Team & Contributor. The remaining 70% of SILO_MAX is allocated to miners as rewards for providing data storage service, maintaining the blockchain, distributing data, running contracts, and other services. There are multiple types of mining that these rewards will support over time; therefore, this allocation has been subdivided to cover different mining activities. A pie chart reflecting the SILO Coin allocation is shown in the following figure:

Token Allocation

- 10% SILO Coin Foundation
- 10% Team & Contributors
- 10% Fundraising
- 15% Mining Reserve
- Storage Mining Allocation 55%

Legend: SILO Coin Foundation · Team & Contributors · Fundraising · Mining Reserve · Storage Mining Allocation

Storage Mining Allocation: 1.1B SILO tokens are minted based on the performance of the network. The amount of tokens available for Baseline Mining incentivizes the network to collaborate and grow for the next 20 years.

Mining Reserve: 300M SILO tokens are held back in reserve to incentivize future types of mining. It will be up to the community to decide how these tokens would be released and which sets of stakeholders should be incentivized.

Content

The mission of Authentik Studios is to provide all types of creators with the tools that they need to elevate and present their content to the emerging world of NFTs. Authentik's team of world-class designers create digital versions of one-of-a-kind physical items, allowing creators to auction off the recreation stand-alone, or as a package with the physical piece. Authentik Studios has partnered with the following creators, and are building an ever-expanding roster of high-level artists in order to bring their work to the emerging industry of NFTs.

- Jefferson Airplane
    - Jefferson Airplane was an American rock band based in San Francisco, California, that became one of the pioneering bands of psychedelic rock.
    - Headlined Monterey Pop Festival in 1967 and Woodstock in 1969
    - Have two songs featured in Rolling Stone's "500 Greatest Songs of All Time"
    - Included in the Rock & Roll Hall of Fame
    - Received a Grammy Lifetime Achievement Award.

- Shane Guffogg

    Guffogg is one of the leading contemporary artists, and has worked in the media of painting, drawing, and sculpture. He is known mainly for his abstract artwork.

    - *Ginevra de Benci #24* sold for $311,516, at an auction in October 2017 at Cornette de Saint CYR, Paris, France "Art Contemporain" auction
    - *As of Today #3* was sold for a record high price of $285,000 at Paris auction house, Cornette de Saint CYR
    - *At the Still Point of the Turning World - Inhabit the Garden,* sold at Cannes Encheres auction (France) for $224,000
    - Guffogg's artwork has been collected by Bill and Hillary Clinton, Ed Harris, Dustin Hoffman, Meg Ryan, Sophia Coppola, Hank Azaria, Common, the UAE Embassy in Washington D.C., and more

- Sir Daniel Winn

    Sir Daniel K. Winn is an internationally recognized blue-chip artist and fine-art curator. He is focused on developing his style of Existential Surrealism through his paintings and sculptures.

    - Board Chairman of The Academy of Fine Art Foundation
    - CEO and curator of Masterpiece Publishing, Inc.
    - Founder of Winn Slavin Fine Art, one of the most prestigious art galleries in Beverly Hills.
    - Awarded the 2019 International Gold Medal for Best Sculpture at Grand Jury de Mondial Art Academia

- Bingyi

Bingyi is best known for her enormous-scale ink paintings which highlight the conditions of the natural or urban landscapes in which she creates. She is also known for her "ink bomb" Shanshui paintings, which utilizes massive mediums such as helicopters to create her work.

  - Bingyi's artwork has occupied the center of Toronto's city hall to create an 1,800-square-meter ink painting
  - Bingyi received a permanent installation in the Shenzhen Bao'an International Airport. Nicknamed "ink bomb," the installation (*Epoché)* became a viral internet sensation

Roadmap

We vision our roadmap in the follow three phases:
Phase 1:
- Cornerstone/Seed Round Fundraising
- Roll out SILO Digital Display to NFT collector market
- Onboard exclusive artists to our NFT marketplace
- Release detailed technical whitepaper for SILO Network
- Launch Dev Net and Internal Test Net

Phase 2:
- Private Round Fundraising
- Launch SILO Coin, Start circulating in our community and network
- Develop SILO Network for Secure NFT Metadata storage
- Build a complete ecosystem of NFT creation, collection, presentation, and storage
- Alphanet Launch, Public Testnet

Phase 3:
- IDO Initial Defi Offering- SILO Coin
- Deploy SILO Network on existing hardware
- Launch Incentivized Testnet, Mainnet

TEAM

The team behind Authentik Studios entered this space because it combines elements of our CEO, Rudy Rong's, previous two companies: Magic Cube, a blockchain gaming company, and Magic Ice Cube, which focuses on solving supply chain issues for large companies and government agencies.

Rudy Rong
CEO
Serial Entrepreneur, USC

- Founder of Magic Cube - A Blockchain Gaming Platform that was invested by Tencent, IDG, and more
- Featured in Forbes China's 30 Under 30
- MCC is traded at $100 Million Valuation with 1 million dollar trading volume on 7 different exchanges
- Founder & CEO of Magic Ice Cube - According to CBS 60 Minutes, MIC is one of the largest PPE distributors in America
- Magic Ice Cube has amassed over $150 million in revenue in 2020 alone, with plans to go public in 2022
- Graduated from USC, Bachelor in Business and Cinematic Arts
- Interviews with CNN, CBS, and 60 Minutes

Tikoshi
CTO
Senior Hardware/Software Engineer

- Technologist with extensive experiences in hardware, software, and crypto fields. Worked at Apple, DJI, and multiple early stage startups.
- Proven track record of delivering great hardware products. Brought many ideas to life with expertise in manufacturing, 3D printing, and silicon/system design.
- Strong background in software, website and APP development. Knowledgeable in machine learning and computer vision for arts.
- Graduated from UC Berkeley with Master in Electrical Engineering and Computer Sciences, USC with Bachelor in Electrical Engineering

Adam Herrin
CRO
Head of Sales Dept

- Led the expansion and management of sales teams at Magic Ice Cube leading to a growth of over 20% in revenue
- Oversaw the creation of company marketing materials and managed the design department
- Developed large-scale promotional campaigns for national television, including MIC's CBS 60 Minutes interview with Lesley Stahl

- Increased company's philanthropic endeavors and spearheaded related PR campaigns
- Executed sales exceeding $15 Million in revenue during his first year with MIC, securing accounts with big-box retailers such as TJ Maxx

Ethan Rabinowitz
CSO
Compliance and Front-end oversight

- Worked at multiple startups in advisory and executive capacity
- Fostered the expansion of Magic Ice Cube that led to the creation of VYBY and Authentik Studios
- Experienced contract negotiator, has handled diverse portfolio of partnerships and clients in various fields
- Graduated from University of Colorado at Boulder with a BA in Political Science, attended Maurice A. Deane School of Law at Hofstra University

Riley Robbins
Creative Director

- Has directed over 600 fashion films, music videos, short films, commercials, and documentaries
- Has overseen projects featuring the likes of Pharrell Williams, Vogue, Nike, Adidas, Dolce & Gabbana, A$AP Rocky, Snoop Dogg, and Playboy, and Foot Locker
- Riley's unique vision and experience fuels Authentik Studio's groundbreaking and innovative content for the benefit of both the artist and consumer

Sophaur One
VP - Talent Acquisition

- Twelve years in the sports, music, and entertainment industries
- Through his time as a professional athlete, Sophaur has amassed a large network of individuals including athletes, musicians, and high level executives, creating a large pool of both existing and potential clients for Authentik Studios
- Extensive experience as a talent acquisition consultant for both startups and large companies

Alison Wang
Chief Marketing Officer

- BA in Communications from USC, *magna cum laude*
- Previous roles include working as the Director of Marketing for Magic Cube
- Four years of experience conducting personal PR campaigns on a national level for Rudy Rong, including interviews with CBS, CNN, and 60 Minutes

Joe Li
Software Engineer

- Background in hardware and software, with experience in programming, product management, and manufacturing processes
- Worked at multiple hardware companies and early stage startups
- Product driven engineer with great passion for product design and UI/UX
- Graduated from University of Southern California with a Bachelors in Physics, NYU, and a Master in Science