

Filecoin is a decentralized storage network built by Protocol Labs with a goal to enable anyone to sell their excess storage on an open network.

Filecoin differentiates itself from other decentralized storage networks with a mechanism that reduces the ability to commit storage fraud. Filecoin will serve as an incentive layer to the InterPlanetary File System (IPFS). Unlike HTTP, IPFS is a protocol that stores files across participating nodes, and addresses content by hash, instead of by server.

## Project Overview

Name	IPFS
Issuer	Protocol Labs
Category	Platform
Sector	Storage
Sale Start	08/07/2017
Sale End	09/07/2017

## Token Overview

Name	Filecoin
Symbol	FIL
Type	Native
Initial Distribution	200,000,000
Current Supply	N/A
Max Supply	2,000,000,000
Emission Type	Ongoing

## Resource Links

- [Website](#)
- [GitHub](#)
- [Twitter](#)
- [Telegram](#)
- [Reddit](#)
- [Whitepaper](#)

## Project Background

Filecoin is looking to provide an alternative to traditional online storage providers and protocols. Their technology acts as an incentive layer for the peer-to-peer file transfer system IPFS, which uses hash-addressed content structures to store data instead of centralized servers and IP addresses. This is intended to reduce redundancy, increase permanence, and improve efficiency.

Filecoin incentivizes IPFS by rewarding storage providers and retrievers for contributing resources to the system. The network also comes with built-in Ethereum integration allowing developers to access data on Ethereum's blockchain and interact with its smart contracts.

Protocol Labs hopes to build a fundamental layer for data infrastructure that can be used by both blockchain and traditional providers, like Amazon Web Services and Microsoft Azure. In this way it is reaching to serve the 'world computer' niche for blockchain applications.

The project plans to achieve this goal by creating a marketplace in which any user who has storage capacity can connect to the network, creating a supply of unused storage both in consumer hardware as well as data centers of existing businesses. Filecoin believes this will reduce the price of storage in a way similar to how sharing economy companies like Airbnb reduced the price of short-term rentals in marketplaces traditionally dominated by large players with large capital requirements.

## Technology

Protocol Labs introduced many new technologies in its Filecoin whitepaper that could add value to multiple blockchain projects. Filecoin is secured by proof-of-work in the same way that bitcoin is, but this work is specifically related to storage of data. Instead of finding a random nonce to make the block hash fit in a target range, the networks proof-of-work is restricted to proving that a miner has stored data for a specific duration and replication. This is achieved with two new types of proof-of-work; proof-of-replication (PoRep) and proof-of-spacetime (PoSt).

Proof-of-replication allows a server to convince a user that some data has been replicated to its own uniquely dedicated physical storage while proof-of-spacetime allows an efficient prover to convince a verifier that they are storing some data for a specified duration of time.

These proofs allow Filecoin to solve issues with large-scale storage networks made of independent parties, by making it theoretically impossible to falsify data storage records to increase miner rewards. Competitors like SiaCoin and Storj lack this functionality, though they have not yet created enough storage demand for this to be a significant issue.

Miner proofs are used to create a network based on three primary methods, put, get, and manage. The put and get methods are responsible for putting data in storage and accessing it on client request respectively. The manage method is responsible for managing the marketplace by matching buy and sell orders as well as managing buyer and seller reputation on the platform.

These methods are executed across two marketplaces, storage and retrieval, which are managed by different miners. Protocol Labs believes that miners will often participate in both markets. Storage miners are responsible for receiving put requests and storing client data while retrieval miners are responsible for managing get requests and giving clients their data. Storage providers run the manage method in conjunction with clients and auditors.

## Distribution

Filecoin completed a \$205 million token offering through CoinList using the sale of Simple Agreements for Future Tokens (SAFT).<sup>1</sup> The SAFT is a legal agreement inspired by the Simple Agreement for Future Equity (SAFE), pioneered by Y Combinator. It gives accredited investors an allocation of tokens once the network is live in return for an upfront investment.

Of the \$205 million raised, \$50 million was sold to advisors at a rate of \$0.75 per FIL token, with an additional discount of between 0 and 30%. Vesting for advisors ranged from one to three years. The remaining \$155 million was raised from investors with FIL tokens priced based on a linearly increasing function. The starting price for the sale was \$1.00 per FIL and increased up to \$5.00 per FIL using the formula price = \$ amount raised / 40 million, with a hard cap of 200 million FIL sold.

Ongoing distribution of tokens comes from two primary sources: vesting and mining. Over time the majority of FIL tokens will be allocated to miners that provide services to the network. This allocation represents 70% of total supply. The rate of mining rewards is cut in half every six years. Investor tokens, from the advisor and token sale rounds, will vest on variable periods with a six-month minimum. There will be a maximum of two billion FIL tokens in existence, with nearly 90% distributed by year 16. Of the original genesis tokens 15% were allocated to Protocol Labs, 10% to investors, and 5% to the Filecoin Foundation.<sup>2</sup>

<sup>1</sup> Source: <https://protocol.ai/blog/filecoin-sale-completed/>

<sup>2</sup> Source: [https://coinlist.co/assets/index/filecoin\\_index/Protocol%20Labs%20-%20SAFT%20-%20Private%20Placement%20Memorandum-bbd65da01fdc4a-15219c49ad20fb9e28681adec9fae744c41cccd124545c4c73.pdf](https://coinlist.co/assets/index/filecoin_index/Protocol%20Labs%20-%20SAFT%20-%20Private%20Placement%20Memorandum-bbd65da01fdc4a-15219c49ad20fb9e28681adec9fae744c41cccd124545c4c73.pdf)

## Team

### Juan Benet

Founder

- Received B.S. and M.S. in computer science from Stanford before founding a gaming studio

### Michelle Lee

Product management

- Previously founded Textizen

### Colin Evran

Business development and operations

- Held roles at Bain & Co. and McKinsey & Co.

### Matt Zumwalt

Program manager

- Founder of multiple data curation companies

## Investors and Advisors

Vinny Lingham

Fred Erhsam

Naval Ravikant

Dylan Field

Jaan Tallinn

Winklevoss Capital

Digital Currency Group

BlueYard Capital

Funders Club

Y Combinator

Stanford University

StartX

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## Additional Resources

- [Filecoin Primer](#)
- [Filecoin Token Sale Economics](#)
- [Filecoin SAFT](#)
- [Juan Benet Speaks at Ethereum Devcon](#)
- [Juan Benet IPFS Talk](#)

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