

FILET Whitepaper

FILET Brings Filecoin to DeFi

V1.1.0

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Abstract

The core of the Filecoin blockchain is the Proof of Spacetime (PoSt) consensus mechanism. A Filecoin node mines FIL tokens by providing storage space to the system. The PoSt algorithm randomly validates the storage space of a node. Meanwhile, a node is required to pledge FIL as the collateral in an amount corresponding to the storage space size. At the time when this whitepaper is written, 1TiB Filecoin storage space requires 10 FIL tokens. From this point of view, Filecoin is essentially a Proof of Staking (PoS) blockchain.

The collateral is a huge financial barrier for Filecoin miners. On another side, the majority of FIL token holders are unable to participate in Filecoin mining because Filecoin mining equipment is very expensive and operating a node is extremely technically challenging. The Filecoin token economics does not implement a staking service for FIL holders.

Filet provides FIL staking service by bridging the FIL token holders with Filecoin mining operation. It is essentially a decentralized cloud mining service platform that allows ordinary FIL users to participate in Filecoin mining with zero risk, high returns, and low barrier.

Filet uses decentralized smart contracts and cross-chain bridges to provide a trusted staking service in an open and transparent manner.

Background of Filecoin Mining Market

1. Market size

The Filecoin mainnet was launched in October 2020. In less than 10 months, the total storage space in the Filecoin system quickly reaches 10 EiB. The FIL market cap is over \$20 billion. Today, over 3000 miners are operating the Filecoin network. Each day, 339,000 FIL tokens are mined, worth \$34 million. The total collateralized FIL is over 108 million, worth over \$10 billion. The Filecoin mining market is the third largest only next to Bitcoin and ETH mining. With the expansion of the Filecoin ecosystem, the market size is also expanding.

2. Problems and Opportunities in the market

Filecoin mining requires expensive and complicated hardware, including enterprise-grade storage servers, miner node servers that run the protocol, worker servers that encrypt the storage space and network equipment. As an example, a basic Filecoin node with 1PiB storage space requires over \$300,000 hardware investment. In addition, 1PiB storage space requires 10,000 FIL collateral, which is over \$1M capital investment. The Filecoin PoSt consensus mechanism will slash a node once the system detects the node is offline or it cannot prove its storage space in time. Operating a Filecoin node requires a professional team and 7x24 operation.

To reduce equipment investment and avoid operation, small miner operators have to connect their storage servers and worker servers to a shared Filecoin node operated by a larger Filecoin mining pool. The mining pool typically charges 20% of mined FIL as the management fee. However, this creates a new problem. The mining pool operator controls everything and a shady operator might delay payment, overstate costs or understate revenue.

To meet the astonishing high storage collateral requirement, miners typically borrow FIL from big lenders, with annual interest rates as high as 40%. And they also need to put a collateral for the loan. Meanwhile, many FIL token holders hold a huge amount of FIL and they are unable to earn high returns from their holdings.

The market needs a decentralized, transparent and trust platform that enable FIL holders to participant in Filecoin mining by simply staking FIL in the platform.

Introduction to FILET

1. FIL Staking Service

Filet tokenizes Filecoin mining power and introduces it into the DeFi ecosystem to provide FIL holders with risk-free and high-growth FIL staking services, and the annualized FIL return is as high as 50%. For FIL holders, Filet is a decentralized Filecoin staking service. Any FIL holders with as little as 10 FIL can participant in Filet. Users can choose flexible staking periods. The longer the staking period, the higher the return. Assets and earnings are guaranteed by smart contracts.

2. Tokenization of Filecoin Mining Power

Filecoin mining operators collateralize their Filecoin mining power to Filet to receive FILE tokens. One FILE token strictly represents 1GiB Filecoin mining power. They stake FILE tokens into Filet to borrow FIL staked by users. The borrowed FIL will be directly pledged to a Filecoin mining node as collateral.

3. DeFi on Filecoin

Filet is a Dapp deployed on Ethereum, BSC and Heco and is connected to the Filecoin blockchain through cross-chain bridges. Users stake wrapped FIL (such as Coinlist's EFIL, Huobi's HFIL, BSC FIL and Heco FIL) into Filet and immediately start receiving earnings. Staked FIL can be withdrawn at a time that a user chooses.

Tokenized mining power and staked assets are managed by the Filet smart contracts and cross-chain bridges. It's completely safe, open, and transparent.

FILE Token

1. FILE

Filet tokenizes Filecoin mining power into FILE tokens., and each FILE token strictly corresponds to 1GiB Filecoin mining power. Filecoin mining operators collateralize their Filecoin mining power to Filet to receive FILE tokens.

FILE brings liquidity to Filecoin miners as they can trade FILE freely. Miners can also stake FILE into Filet to borrow FIL for storage collateral, so they grow their mining power further.

2. Token Metrics

Max supply of FILE token is $200 \times 1024 \times 1024 = 209715200$, corresponding to 200PiB Filecoin mining power.

- 524288 FILEs (about 0.25%) are used as liquidity pool.
- 209190912 FILEs (about 99.75%) are released according to the mining power collateralized by the mining pool.

FILE has no private and public offering, no team allocation, no pre-mining, and no airdrops.

Since FILE strictly corresponds to 1GiB mining power, once the total collateralized mining power reaches 200PiB, the Filet DAO community can vote to decide whether to increase the max supply of FILE.

Economic Model of Filet

1. Staking FIL

A user stakes 10 FIL and obtains 1TiB Filecoin mining power linearly in 30 days. Users can choose the flexible staking period, or fixed period (180 or 360 days). A single user is allowed to stake 5000 FIL at most.

1.1. Fixed Staking Period

During the staking period, 80% of the unlocked FIL mined by the mining power (minus gas fees occurred in the staking period) belongs to the user. The mining pool receives the remaining output as the service fee to cover the cost of mining equipment and operation.

Per Filecoin token economic model, 25% of mined FIL is immediately unlocked. The remaining portion is unlocked linearly in 180 days. User can only receive earnings from the unlocked FIL. After the staking period finishes, the remaining unlocked FIL belongs to the mining pool. A user no longer receives earnings once the user withdraws staked assets, or the staking period finishes.

Users cannot withdraw staked assets prior to the mature time unless there are new users onboard in the same day with the same or larger amount of staked assets.

1.2. Flexible Staking Period

During the staking period, users receive a fixed yield rate which is periodically determined by an algorithm in Filet. As a rough estimation, the annualized return of flexible staking period is slightly less than half of the return of the 180 days staking period.

Users can withdraw staked assets at any time. A user no longer receives earnings once the user withdraws staked assets.

2. Staking FILE

Since 1 FILE strictly represents 1GiB Filecoin mining power, users can always stake FILE to Filet to receive mining power and generate earnings. The staking period is flexible so users can withdraw staked FILE any time. The annualized return of staking 1024 FILE is slightly higher than the return of staking 10 FIL (fixed 180 days staking period) even though both receives 1TiB Filecoin mining power.

3. Mining Power Allocation

When a user stakes FIL, Filet automatically selects a mining pool with good credit and enough unallocated mining power to serve the user. The user receives corresponding mining power linearly in 30 days.

A mining pool collateralizes mining power into Filet to receive FILE tokens. For example, a miner pool would receive 1,024,000 FILE if 1000TiB mining power is collateralized. In order to borrow FIL from users, the mining pool needs to stake FILE into Filet. Staking 1024 FILE can borrow 10 FIL.

When a user stakes FILE, the mining pool must provide enough mining power (1FILE = 1GiB mining power), if not, a punishment is triggered immediately. For each FILE, a penalty of 1/365 FILE per day will be enforced, until the mining pool has enough mining power to serve users.

4. Earnings

For users who chooses the flexible staking period, daily earning is calculated with the promised yield rate when a user stakes FIL into Filet.

For users who chooses a fixed staking period, a user's daily gross earning is equal to

$80\% * (25\% * \text{daily minted FIL} + \text{daily unlocked FIL from } 75\% \text{ of total minted FIL in the previous 180 days})$

Note:

(1) Daily minted FIL of a user = daily minted FIL of the pool * user's mining power/total mining power.

(2) Per Filecoin token economic model, 25% of minted FIL is immediately unlocked and the remaining 75% will be unlocked evenly in 180 days.

A user's daily net earnings is the daily gross earnings minus the shared gas fees of the day.

For fixed staking periods, a user receives no earning after the staking period finishes even the user does not withdraw staking assets.

Economic Model for Mining Pools in Filet

1. Collateralize Mining Power

Any Filecoin mining pool can register their Filecoin nodes to Filet after receiving the approval from the community. Then an approved mining pool can collateralize their Filecoin mining power to Filet. Once the community approves the request, the corresponding number of FILE tokens will be issued to the mining pool.

The FILE tokens obtained by the mining pool can be traded in the secondary market. There is a great way for a mining pool to add liquidity to their mining power.

2. Borrow FIL for Storage Collateral

Per Filecoin token economic model, storage collateral is required for new Filecoin mining power. 1 TiB Filecoin mining power requires 10 FIL. Mining pools can borrow FIL from Filet by staking FILE tokens as a collateral. The borrowed FIL will be directly sent to the mining pool's collateral wallet. For example, if a mining pool has existent 5PiB mining power, they can receive $5 \times 1024 \times 1024$ FILE from Filet after collateralizing that 5PiB mining power. Then, they can borrow $80\% \times 5 \times 1024 \times 10$ FIL from Filet after staking their FILE tokens, which is enough for the storage collateral of new 4.8P Filecoin mining power.

The borrow program is secured by smart contracts and the loan is collateralized by FILE assets.

3. Distribute Earnings

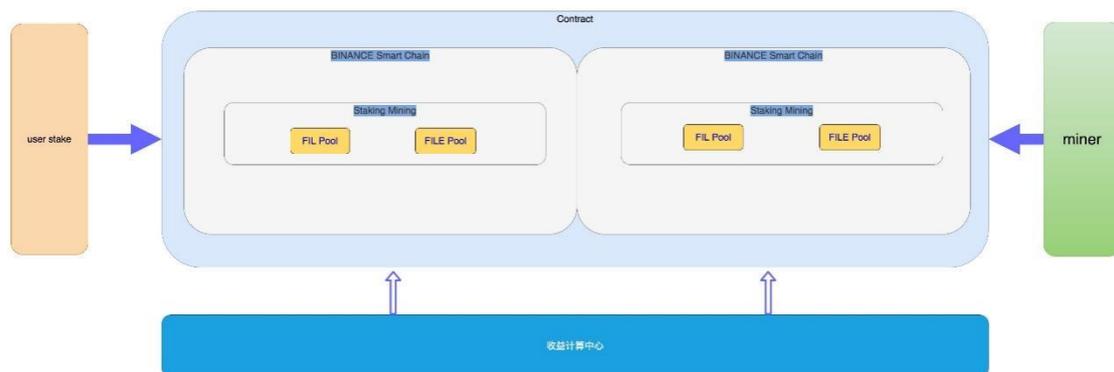
Mining pools shall transfer users' daily earning into Filet even users do not claim earnings. Filet automatically calculates the total amount of earnings users deserve. If Filet does not receive enough amount of users' earnings from a mining pool, it will automatically freeze all assets of the mining pool and assign no more new users.

Filet distributes earnings to an individual user when the user claims earnings from the Filet Dapp.

4. Slash

The mining pool must ensure that there is sufficient unallocated mining power available for users to stake FILE (1FILE = 1GiB mining power). If the mining pool does not have enough mining power to provide when the user stakes FILE, a slash is triggered immediately. For each FILE, a penalty of 1/365 FILE per day will be charged until the mining pool has enough mining power to serve users. If the mining pool does not have FILE tokens or other assets in the smart contracts to pay the penalty, all the assets of the mining pool will be frozen, and the mining pool can no longer accept new users.

Technical Architecture of Filet



Project Roadmap

- 2021.03

Project initiation, technical development, and whitepaper writing.

- 2021.04

Technical development, testing.

- 2021.05

Launch on Heco.

- 2021.06

Launch on BSC.

- 2021.10

Launch on native Filecoin.

- 2021.11

Supports multiple mining service providers.

- 2021.12

Support more financial derivatives.

- 2022

DAO Governance.

Community DAO Governance

Filet is a decentralized platform operated by community. FILE holders have the rights to equally participate in platform governance and can participate in platform decision-making by voting with FILE tokens. The DAO governance of the Filet community will be implemented in two stages:

- In the initial stage of after the launch of Filet, the platform is operated by the project initiator, the decision-making process is open and transparent to the community.
- After the community DAO governance is online, the community can vote on the proposals to change the system parameters and approve new onboard mining pools.

The community DAO can initiate voting on proposals or system parameters including but not limited to the following content:

S/N	Governance matters that can be voted
1	Reviewing applications of new mining pools
2	Adjust the economic model of the staking service
3	Adjust requirements to mining pools
4	Increase the max supply of FILE

Other instructions

The **50%** of "*The annualized income of currency standard can be as high as 50%*", and the **10FIL** of "*Users can pledge 10FIL to linearly obtain 1TiB Filecoin computing power within 30 days*" mentioned in this document will be adjusted in different stages based on the Filecoin economic model.

Disclaimer

This document has no token sale content. The FILE token issued by the platform is only used to present the FIL mining power. 1 FILE strictly corresponds to 1GiB mining power and can be staked at any time for 1GiB mining power.

The information in this whitepaper may be adjusted accordingly as the project progresses. The team will release the updated content to the public by publishing announcements on the website or publishing a new version of the whitepaper.

Participants shall obtain the latest version of the whitepaper timely and adjust their decisions based on the updated content.

This whitepaper is only a document that introduces the project and does not serve as a guidance on investment. The platform will not bear the user's loss caused by the content of this whitepaper.

Due to the existence of force majeure factors, there is a risk that the team may not be able to complete the content of this whitepaper.

The platform has clearly described possible risks to users. Once users participate, it means that they have confirmed their understanding and approval of the various terms and conditions in the detailed rules of this whitepaper and accepted the potential risks of the platform and to bear the risk themselves.