What is Filecoin

This section aims to provide a comprehensive overview of Filecoin to developers and serves as a reference that developers can check back on.

Filecoin is a peer-to-peer network that stores files, with built-in economic incentives and cryptography to ensure files are stored reliably over time. In Filecoin, users pay to store their files on storage providers. Storage providers are computers responsible for storing files and proving they have stored them correctly over time. Anyone who wants to store their files or get paid for storing other users' files can join Filecoin. Available storage, and the price of that storage, are not controlled by any single company. Instead, Filecoin facilitates open markets for storing and retrieving files that anyone can participate in.

Filecoin is built on top of the same software powering PFS protocol, which is a peer-to-peer distributed storage network that leverages content addressing to allow permanent references to the data, and avoids relying on specific devices or cloud servers for addressing the content. Filecoin is different from IPFS because it has an incentive layer on top to incentivize contents to be reliably stored and accessed.

Filecoin enables several use cases, from Web3 native NFT and metaverse/game assets storage, incentivized permanent storage, to archiving Web2 datasets as a cheaper alternative to cloud storage. For example, NFT.Storage utilizes Filecoin to provide a simple decentralized storage solution for NFT contents and metadata, while Shoah Foundation and Internet Archive leverages Filecoin to backup their contents. Filecoin also supports a wide range of formats of data, including audio and video files, allowing Web3 platforms such as Audius and Huddle01 to leverage Filecoin as the decentralized storage backend for music streaming and video conferencing.

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