Filecoin Foundation

The Filecoin Network and the Filecoin Token (FIL)

What is the Filecoin Network?

The Filecoin network is a global, decentralized cryptocurrency-powered **storage networ**k that's designed to preserve humanity's most important information. The Filecoin network consists of a **decentralized network of independent participants and small businesses** and serves as an affordable, open-source competitor to cloud storage solutions provided by big tech companies.

The Filecoin network consists of:

- 3,000+ storage provider systems across 40+ countries who have made over **33 million storage deals and 1 billion transactions**
  - Filecoin **storage providers are independent participant**s in the Filecoin network. They create a competitive environment by setting their own fees, setting the stage for cost-effective and highly customizable storage options.
  - Independent storage providers globally store more than **1.0 EiB (1.153 billion GB) of data** – equivalent to over **290 million 1080p movies.**
  - About **4 PiB (4.5 million GB) of data** is added to the Filecoin network daily.
- Thousands of GitHub contributors who build on the network's open-source code.
- 300+ organizations actively building tools and applications on the Filecoin network.
- Three implementations of the **Filecoin network protocol** in different programming languages (Forest, Lotus, Venus), maintained by **three separate organizations.**
- An open governance process for determining improvements to the Filecoin protocols, based on an open feedback process **available to all Filecoin users**.

What is the Utility of the Network?

The Filecoin network is useful because it can help ensure that **important data is stored permanently**, on many devices around the world. Each piece of **content has a unique identifier**, and when you look for that content identifier it will pull the content from anywhere in the world that has the content. This means that the availability of information is **not dependent on any one entity or company**. The Filecoin network's utility was recently enhanced with the Filecoin Virtual Machine (FVM), which aims to bring large-scale computation and the ability to power web-scale apps to the network through the use of smart contracts.

What is the Filecoin Token (FIL)?

The Filecoin token (FIL) is a **utility token** that plays a critical role in the operation of the Filecoin network. FIL is used as a mechanism to process the millions of transactions on the Filecoin network, providing (1) compensation for storage providers and (2) a tool to ensure the data is reliably stored over time.

To ensure reliable storage, some FIL is locked up until the storage contract is complete, with periodic checks to ensure that a unique copy of the original data is being stored correctly.

What is Filecoin Foundation?

Filecoin Foundation (FF) facilitates governance of the Filecoin network, funds research and development projects for decentralized web technologies, and supports the growth of the Filecoin ecosystem and community. Its mission is to preserve humanity's most important information.

What are Some Use Cases for the Filecoin Network?

Defending Human Rights

The Filecoin network and its underlying technology can help human rights defenders **collect, verify, and preserve data**, to prove that **digital evidence is authentic and unmodified.**

For example, Starling Lab — a project of **Stanford** and **USC** — has made several submissions of **evidence of Russian war crimes in Ukraine** to the International Criminal Court. Starling used the Filecoin network to both permanently preserve this digital evidence and also verify that it was authentic and had not been tampered with.

Reuters and **Canon** developed a proof-of-concept in which photojournalists' pictures are digitally signed by the camera, sent to the Reuters system, registered onto a public blockchain, and preserved on cryptographic archives that use the Filecoin and Storj protocols.

The Guardian Project is building a distributed web-enabled mobile app for eyewitnesses that authenticates content captured on smartphones. Investigative journalists and reporters looking to preserve critical primary source documents have **uploaded nearly 400,000 documents from Muckrock's DocumentCloud platform to the Filecoin network.**

Store Important Data Sets

The Filecoin network can provide governments and researchers with resilient and cost-effective ways to **store open and public datasets** so they remain securely accessible to citizens for the long term. Currently, the Filecoin network stores important scientific datasets, from institutions including the **University of Maryland, the University of Utah, Berkeley's Underground Physics Group,** and **the ATLAS Experiment at CERN**. The Filecoin network also stores copies of open datasets created by government institutions like **NASA, NIH, the National Weather Service,** and **the US Geological Survey.**

Preserve History Against Link Rot

On the existing web, links can "rot" over time. Many links in important documents, such as Supreme Court cases, Congressional records, and critical news stories no longer work as the **original information goes offline** or is replaced with new information. The Filecoin network can protect against link rot with a **content-based link**, which is **independent of particular servers**. **Harvard's Library Innovation Lab** is working to explore how the Filecoin network's distributed web technologies can ensure that links work permanently.

A Platform for the Decentralized Web

Hundreds of teams are building decentralized apps on the Filecoin network, including Huddle01, **a decentralized video conferencing platform**, the Numbers Protocol, which is building a **decentralized photo storage network** with a unique content identifier for each photo, and NFT.Storage, which uses the Filecoin network to **permanently store over 100 million NFTs**.