



Making Web3 Accessible for All Through
Ecosystem Leadership and the
Filecoin Network



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Key Highlights

- Seal Storage is a data platform that aims to make Web3 accessible for all by providing sustainable, immutable, and affordable Web3 cloud storage.
- As one of the earliest storage providers on the Filecoin network, Seal Storage is an established leader in the ecosystem. The company is a top storage provider in North America, with over 20PB of capacity across the U.S. and Canada, and is looking to add over 100PiBs more.
- Seal Storage currently serves universities, research institutes, enterprises, and other firms to store their data in a more sustainable, affordable, and immutable way.

Providing an alternative data storage solution

The use of cloud infrastructure services has spiked over the past few years, since companies around the world were forced to digitize their businesses during the pandemic. In Q4 2021, spending on these services grew by 13.5% YoY to an average of \$21.1 billion, and tech research firm IDC predicts a continuous growth and need for these services as supply continues to catch up to demand.

Founded in 2021 to shake up the \$76 billion cloud storage market largely controlled by a few big tech companies, Seal Storage provides Web3 data storage for universities, research institutes, enterprises, and other firms in need of a more sustainable, secure, and affordable home for their valuable data. Michael Horowitz, the CEO; Andrew McFarlane, CIO; and Alex Altman, COO, are the founders of Seal Storage and have been working in blockchain for the past five years on a quest to revolutionize the cloud storage industry and make Web3 accessible for all.

Seal's team previously held careers in traditional finance, cloud storage, and cybersecurity. As the blockchain industry developed, each team member seized the opportunity to be involved in the emerging tech for various reasons. The Filecoin network was of special interest to all of

the founders due to its immutable nature, data preservation, security, and the ability to create real-world applications through Web3.

In its early days, the Seal Storage team found that after speaking with current data storage customers with large and valuable data assets, a majority of them were overwhelmed with the task, paying too much in egress fees, and expressed concern over losing control of their own data once in the cloud. The Seal Storage team jumped at this challenge and began to build a different kind of solution than what's been offered, to tackle control, costs, and the amount of customer-input needed.

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“Present day costs to store large + PB scale datasets into centralized storage is cost prohibitive and the egress charges alone to access your data is a challenge for our customers. Seal Storage provides the same access workflows that our customers are accustomed to, without a decrease in productivity, and most importantly at a fraction of the cost,” said Jacques Swanepoel, CTO at Seal Storage”

Keeping an eye on IPFS

After a few years, Michael, Andrew, and Alex began taking note of the growth of IPFS and the successful Filecoin mainnet launch in the decentralized storage space, and began building a technical team to serve as the foundation for Seal Storage. In Dec 2021, Seal Storage officially joined the larger Filecoin network, as one of the earliest storage providers.

As Seal Storage continued to build out its team and nodes on the Filecon network, the team began stewarding clients into decentralized cloud storage. They were effective by showing clients the cost savings, security, and added sustainability that the company could provide any entity with large data sets, powered by renewable energy.

What's Ahead: Onboarding Real Use-Cases to Web3

Now a leader in the ecosystem, Seal Storage is continually adding more capacity to the Filecoin network and bringing in new organizations that are in need of the benefits that decentralized storage provides.

Because Seal Storage's platform is built on Filecoin, the company is incentivized to protect data and earn block rewards, enabling the company to provide affordable (sometimes free) storage to universities and institutions, preventing them from paying thousands to store valuable data on centralized platforms.

"Filecoin has proved advantageous for users/customers that have a large data footprint problem. This could range from research institutions that are generating large datasets, to institutions that retain backup data that needs to be accessed infrequently. These customers typically keep data on tape for retrieval, and the challenge of retaining this data equates to refreshing the tape infrastructure hardware, which in PB-sized environments is a time- and resource-consuming experience," says Jacques. "The Filecoin network overcomes these challenges with PB-scale storage, and the ability to select the duration of the data, which in some cases could be indefinite."

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Seal Storage decided to provide storage on the Filecoin network because:

Verifiable and reliable storage: Filecoin's built-in processes check the history of files and verify that they have been stored correctly over time. Because every storage provider proves that they are maintaining their files in every 24-hour window, Seal Storage's clients can efficiently scan this history to confirm that their files have been stored correctly, and any observer can check any storage provider's track record and will notice if the provider has been faulty or offline in the past.

Open market: On the Filecoin network, file storage and retrieval deals are negotiated in open markets. By lowering the barriers to entry, Filecoin enables a thriving ecosystem of many independent storage providers.

Competitive prices: Prices for storage and retrieval are determined by supply and demand, not corporate pricing departments. The Filecoin network makes reliable storage available at hyper-competitive prices.

The Seal Storage Team

Seal is an established leader in the ecosystem. The team is made up of enterprise data experts from Seagate, Oracle, and Cisco, and the company has established itself as a top storage provider in North America, with more than 20PB of capacity across the U.S. and Canada, with more on the way.



**Michael Horowitz,
CEO & Co-Founder**

A seasoned financial and capital markets professional. He previously held principal portfolio management and advisory roles with a \$100mm family office venture debt fund. Michael also held senior executive positions within the capital markets groups of both the Canadian Imperial Bank of Commerce (CIBC) and the Bank of Montreal (BMO).



**Andrew McFarlane,
CIO & Co-Founder**

Bringing more than four years of blockchain engineering and business experience, Andrew is deep in the crypto space having launched node infrastructure and invested in 20+ cryptonetworks. Andrew specialized in cybersecurity at Deloitte, and built network infrastructure for video streaming at Canada's largest telecom. Andrew holds a bachelor's degree in Computer Engineering and an MBA from The University of Toronto.



Alex Altman, COO & Co-Founder

An established leader in the Canadian crypto space, with 5+ years of experience as an investor, consultant and financial manager. Alex began his career working in private equity where he was directly involved with the diligence and underwriting of investment opportunities primarily in the real-estate space.



Jacques Swanepoel, CTO

Bringing 30 years of experience as a chief technology officer, entrepreneur and software engineer, Jacques is an expert in virtualization, disaster recovery planning, designing and managing multi-cloud solutions. He has in-depth knowledge of a vast range of networking and storage systems, including distributed systems.

Seal's Success to Date

Seal Storage now stores data for organizations and companies including UC Berkeley, Starling Lab, and Casper Network - all of which were in need of verifiable, secure storage for various types of data.

UC Berkeley

Specifically, Seal Storage partnered with the UC Berkeley Orebi Gann Group to provide secure and immutable storage for large research data sets on neutrinos (think: black holes, exploding stars, and the Big Bang). Because it's a challenge to uncover these 'ghost particles' the Berkeley Group created a detector called Theia to help collect clues about the origins of the universe and push the boundaries of research in particle and nuclear astrophysics. Given the size of these detectors and the large amount of data they can collect, Berkeley was in need of a large secure storage provider - which is where Seal Storage and the Filecoin network came in.

Starling Lab

Starling Lab, the first center in the world dedicated to using decentralized tools to advance human rights, works with Seal Storage to store their archive of testimony on the Holocaust and other genocides, keep record of the 78-day presidential transition from Donald Trump's administration, store photos taken by Reuters journalists to create location, time, and date metadata, and recently began working with Syrian human rights organization Hala Systems, which is using the image provenance technology in aid in court presidings to present evidence of war crimes.

Casper Network

And Casper Network, an open source blockchain optimized for enterprise and developer adoption, partnered with Seal Storage to better secure its NFTs against the risk of loss and manipulation by providing secure scalable storage and provenance. Seal Storage's solution will provide Casper Network with NFT media backup, insurance, and encryption.

Growing the Network

Seal Storage continues to add more capacity and bring new data clients to the Filecoin network and its other storage provider partners, and is now looking to expand that support by even more. Seal Storage has plans to add over 100 PiBs of data storage to the network, and currently has projects in the pipeline that could extend that addition.

The team believes that decentralized storage is a building block to Web3, and is continually looking for ways to further encourage the next generation of the decentralized internet. To learn more about Seal Storage or to get involved, visit <https://www.sealstorage.io/>.

To learn more about Filecoin, storage providers and developer use cases, please visit: [Filecoin.io](https://filecoin.io) or fil.org.



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