



Decentralised Cloud Storage Platform

Whitepaper

Table of contents.

Introduction.	3
Why decentralise cloud storage?.....	4
Who is behind Uplo?.....	4
Uplo is completely open source so you can make sure we're staying honest!	4
Roadmap.	4
Q.1 2021.....	4
Q.2 2021.....	4
Q.3 2021.....	4
Q.4 2021.....	4
UploCoins & UploFunds.	5
UploCoins - The utility tokens that power the Uplo network.....	5
UploFunds - The tokens used for revenue sharing.	5
Renting storage on Uplo.	6
Introduction to renting.	6
The Uplo marketplace.....	6
Smart storage contracts – Keeping your data safe.....	7
Storage fees – Maintaining the Uplo ecosystem.	7
Hosting users on Uplo.	8
Introduction to hosting.	8
Earning UploCoins.....	8
Uplo Hosting – Fees.	9
Hosts Submit Storage Proofs	9
Data security – Peace of mind.	9
It's just the way we built it.....	9
Each file segment is encrypted before being sent out.	9
Join a storage evolution!.....	10
All great projects need funding!	10
Thank you.....	11

Introduction.

Uplo is a decentralized cloud storage platform secured by blockchain technology. The Uplo storage network leverages underutilized hard drive capacity around the world to create a data storage marketplace that is more reliable and lower cost than traditional cloud storage providers. Uplo has its own blockchain, and a utility token that powers it – the UploCoin.

Your data is truly private and gets stored across the globe to eliminate any single point of failure and ensure the highest possible uptime. Since you hold the keys, you own your data. No outside company can access or control your files.

Data cannot be de-platformed or deleted by third parties. Files can not be hacked.

Uplo uses a few important terms that you will want to get familiar with. These will be explained in more detail in their related sections throughout this whitepaper, but here's a short sample.

- **Node:** Your instance or installation of Uplo.
- **Renter:** Someone who uploads files to the network.
- **Host:** Someone who lends their storage space so others can upload files to the network.
- **Contracts:** Formed between renter and host, contracts determine how much data is being stored, for how long, and at what price. These are automatically tracked and completed by the software and blockchain.
- **UploCoins:** The cryptocurrency that powers Uplo.
- **UploFunds:** A secondary, revenue-sharing token on the network that grants the holder UploCoins for every completed contract.

Why decentralise cloud storage?

In today's ever changing digital world, more and more we hear about big tech security breaches exposing the private and confidential data of their trusting users. Often these breaches expose consumers of these products to experience sometimes devastating and long-lasting consequences from the resulting identity fraud and exposure of their private data.

Uplo's core goal is to bring decentralization to data storage. We want consumers to be able to store their data in a way that gives them full, exclusive control. We want to make sure that each users data is securely protected against theft, censorship, and that consumers are never denied access to their data by hackers, miners, developers, or a government body.

Who is behind Uplo?

The visions for Uplo are the brainchild of David Gilbert. David lives in central New South Wales and believes that a consumer's digital data, captured from devices and services that they engage with everyday should be stored in a safe, protected way, preventing any third party from gaining access without the express permission of the consumer.

David has worked as an entrepreneur for most of his working life alongside his regular employment. He has a vast array of skills, knowledge and experience in many areas of IT, business, telecommunications, print, promotion and crypto-technology.

David's vision is to bring a new, unparalleled level of secure data storage and make it available to the everyday user of technology.

Uplo is completely open source so you can make sure we're staying honest!

Roadmap.

Uplo is still in it's primary conception and development phases, this roadmap gives a brief overview of the expected timelines for 2021.

Q.1 2021

Concept & Planning
Begin development
ICO 2,500 UploFunds
Generate awareness

Q.1 2023

Testing
Early Access Program
Generate awareness

Q.1 2024

Official release
ICO delivery
Generate awareness

Q.2 2024

Full steam ahead
Generate awareness
Get exchange listings

UploCoins & UploFunds.

UploCoins – The utility tokens that power the Uplo network.

UploCoins are the utility tokens that power the Uplo network. This article is included early on because anything you want to do on the network requires UploCoins, whether you want to hold or trade, rent or host data.

UploCoins are used in lots of ways but serve a single purpose – facilitating network operations. When you upload files to Uplo, you pay for that storage in UploCoins. If you're a host and you're storing other people's data, you get paid for that in UploCoins. If you own UploFunds, your share of Uplo network growth is paid out in UploCoins.

You can send UploCoins to others, or receive them at your own wallet address. You can store them in our official software, or on a hardware or paper wallet. You can get UploCoins by having someone send them to you, buying them on an exchange, or mining them.

New UploCoins are only made by mining. Uplo is going to be the storage layer of the internet, and billions of UploCoins will be required for the petabytes and exabytes of data that will eventually be stored on the Uplo network.

UploFunds – The tokens used for revenue sharing.

Now that you know all about UploCoins, the utility token used for automatically fulfilling Uplo's smart contracts. But what about UploFunds - the other token on the Uplo network?

UploFunds are tokens used for revenue sharing on the Uplo network; a 1.5% fee from every storage-related transaction on Uplo is distributed to the holders of UploFunds. The Uplo core team will for the time being, retain approximately 75% of all UploFunds.

When contracts are completed on the network, 1.5% of each funding source is reserved for UploFund holders. Funding sources for contracts are:

- Renter fees for storage
- Renter bandwidth costs
- Host collateral

At the end of a contract, the amount reserved is then dispersed to all UploFund holders equally.

Renting storage on Uplo.

Introduction to renting.

When you upload files on the Uplo Storage Platform, you become a **renter**. You upload files to other users who have made their space available, called **hosts**. We use the term renter because Uplo creates contracts with other hosts:

- to store a certain amount of data (whatever you upload)
- for a certain period of time (13 weeks by default, and it auto-renews)
- for a certain amount of money (the market dictates the prices)

You store data on the network by:

- setting an allowance
- uploading your files

The Uplo marketplace.

The Uplo storage network uses a marketplace to find storage for your data. The cost of this storage, often referred to as **pricing**, is the market rate determined competitively by hosts and renters. If hosts find they can lower prices and win more data to store as a result, they'll do it. If renters are willing to pay more to store on high-quality hosts, those hosts might raise their prices.

The price of storage is listed in UploCoins, the cryptocurrency used to buy and sell storage on the network. You'll need to [get UploCoins] in order to upload files. The price of a UploCoin can vary just like the price of any cryptocurrency. This is usually stable for periods of time, ut can sometimes have more significant shifts depending on the crypto trading markets.

Fortunately, the price of UploCoin doesn't really affect the price of Uplo storage. Hosts set their own prices, which creates a marketplace where the best and most reliable hosts are competing for the storage contracts of those who want to upload data. Pricing on the network will take some time to stabilise but it is expected that it will usually work out to around **\$2 per TB per month**. Using Uplo becomes more cost-efficient as you upload more data and store it for longer periods of time.

UploCoins are utility tokens and their sole purpose is to fulfill contracts on the Uplo network.

Smart storage contracts – Keeping your data safe.

Storage contracts are one of the most important features of the Uplo network. They are what allow the entire Uplo ecosystem to work in a trustless way – they form blockchain-enforced contracts between you and the people who store your data that are automatically fulfilled when each party meets their obligation. In other words, they let you form contracts with people you don't know to store your data, and they can't steal your money.

A host's job is to store the data, and they only get paid when they have proved they have done so. A renter's job is to pay the host, and they only pay for the data storage they use.

Storage contracts last for three months by default and are automatically formed when you start uploading your files.

Storage fees – Maintaining the Uplo ecosystem.

As a renter, you pay for the cost of renting storage space. There are also some other fees that you're responsible for.

- **Contract Formation Fees** – Creating storage contracts on the blockchain requires a transaction, and there are very small fees associated with this. Contract formation fees are one-time per contract, and usually cost only a handful of UploCoins.
- **Bandwidth Fees** – You pay for the bandwidth you use when you upload or download files. This can also include wear and tear fees set by the host to help pay for their physical storage devices.

Because contract formation fees only happen once, and your initial upload will consume a lot of bandwidth, using Uplo for longer periods of time results in lower average costs.

Hosting users on Uplo.

Introduction to hosting.

Hosting means you are contributing your excess storage space to the Uplo network. You're helping to keep data where it belongs – safely in the hands of those who uploaded it, the **renters**.

You also earn UploCoins, the cryptocurrency that powers the Uplo network. UploCoins can be used to purchase your own storage space or converted to other cryptocurrency or fiat on crypto exchanges.

Hosts are a critical part of the ecosystem. You are contributing to the decentralized network that is the heart of Uplo. Hosting is also more technical a process than renting, and while anyone can set it up with reasonable ease, there's a lot you'll want to know to maximize your setup.

Earning UploCoins.

As an Uplo host, you're part of a marketplace where you compete with other hosts for renter contracts. Competition should drive prices down, and demand should drive prices up. The goal is a market where people can upload their data with maximum security, minimum cost, and at fair rates that provide revenue to the hosts.

As a host, you can set your own prices. There's a lot of specific price points you can control:

- **Storage Price:** The base price for your storage, per TB/month.
- **Contract Fees:** A small, one-time fee per contract to cover network transaction costs.
- **Upload/Download Bandwidth Price:** Your price for upload or download bandwidth to and from your host, per TB.
- **Collateral:** How many UploCoins you're willing to lose if you don't fulfill the rental contract, per TB.

Storage contracts are one of the most important features of the Uplo network. They are what allow the entire Uplo ecosystem to work in a trustless way – they form blockchain-enforced contracts between you and the people who rent your storage space that are automatically fulfilled.

Uplo Hosting – Fees.

As a host, you earn UploCoin for the storage space that you sell. But in order to create additional incentive for hosts to be good hosts and sustain a reliable network, you also put up collateral.

- **Collateral** – An amount of UploCoins that you're willing to lose if you aren't a good host.

Having collateral incentivizes hosts to be online and to keep their renter data intact. Hosts that go offline or lose data lose their collateral, and hosts that stay online and keep data safe get their collateral back.

Hosts Submit Storage Proofs

At the end of a file contract, the host must prove that it is storing the renter's data. This is called a storage proof. If the storage proof appears on the blockchain within a certain timeframe, the host is paid. If not, the host is penalized.

Storage proofs are made possible by a technology called Merkle trees. Merkle trees make it possible to prove that a small segment of data is part of a larger file. The advantage of these proofs is that they are very small, no matter how large the file is. This is important because the proofs are stored permanently on the blockchain.

Data security – Peace of mind.

Your data is incomparably safe when you use Uplo. Uplo is a fully decentralized cloud storage network. The data normally on Uplo will get split up, encrypted, and the pieces then distributed all around the world to different hosts.

It's just the way we've built it.

Uplo is decentralized, which has a lot of inherent benefits. While we develop the software, we're not in charge of the network. No one is - it's all handled by smart contracts and a blockchain, and **Uplo is completely open source** so you can make sure we're staying honest.

When you upload your files to Uplo, **every single file gets divided into 30 segments before being uploaded**, each targeted for distribution to hosts across the world.

File segments are created using **Reed-Solomon erasure coding**, commonly used in CDs and DVDs.

Each file segment is encrypted before being sent out.

Join a storage evolution!

If your keen to see a completely de-centralised, cloud storage platform that puts you in control of your own data, preventing hackers, big tech and government organisations from ever accessing, destroying or taking control of it, please consider joining the Uplo Community.

What makes open-source projects and platforms great are the keen and dedicated professionals who get involved and share their invaluable expertise, experience and skills to further develop and extend the Uplo Platform. We have a few channels of communication setup at present and invite you to visit and join them.

Facebook Page: <https://www.facebook.com/Uplo-101419761988838>

Facebook Community: <https://www.facebook.com/groups/uplocommunity/>

Discord Chat: <https://discord.gg/bwajckWb>

All great projects need funding!

The costs for setting up the many required services to manage, create and deploy Uplo along with the hardware to kick start it's effectiveness are rapidly increasing. While we understand that there is a cost of wanting to do something great, the truth is simply that it is not a cost that we can sustain long-term without support from like minded and privacy conscious people.

During the planning phase of Uplo, we decided to create a very limited number of 100,000 UploFunds. These UploFund tokens were intended to provide a means of generating capital to help further the development of Uplo and increase its chances of success.

UploFunds could be considered as a share in the success of the Uplo platform, essentially earning an unlimited number of dividends from the transactional volume of transactions carried out on the Uplo network.

With this in mind, we have decided to release an initial 2,500 Uplo funds for purchase. These Uplo funds will be delivered to stakeholders at the time of the official launch of the Uplo network to the general public.

The expected revenue generated from the sale of the UploFunds will go towards further developing the Uplo platform, legal fees for registering trademarks and association memberships, as well as an awareness campaign to encourage more users and highlight the importance of moving our data storage habits to new decentralised, anonymous cloud platforms.

Currently, we are accepting orders from interested parties wishing to invest in the future of data security and privacy, taking a stand against censorship by governments and big tech while making it impossible for hackers and third parties to intercept and access your private data or hold you to ransom for it.

We have set a price of **\$25.00 AUD** per UploFund in the hopes of raising approximately **\$60,000 AUD** to help cover the upfront and on-going costs of maintain this project.

Thank you.

In closing I would like to say thank you for taking the time to learn more about and consider the Uplo Project and the potential it has to change the way we not only store our most valuable digital asset, but how we all must consider the ever-increasing threats our data is subjected to in an ever-changing digital landscape.

One of my biggest incentives to create an anonymous, de-centralised cloud storage platform is primarily for this reason. For too long now, private and confidential information has been stored, shared, sold and squandered in huge data centres across the globe with little to no thought put into the devastating impacts that security breaches and the unlawful access of our data can have on us as individuals.

Furthermore, to this, it seems that both governments and big tech are consistently attempting to enact new laws and ways that they can mine our devices to monitor and track our everyday lives.

In the past few years, governments across the world have tried to bring in new laws allowing them to force big tech companies to create back-doors into our devices and the software they run so that should they decide, government officials can get complete, un-censored access to our private data for whatever reason(s) they choose whilst supressing and censoring the flow of information that we as citizens are allowed access to.

I hereby implore you, as a conscious, free and self-thinking being to rise up, take a stand and be part of a revolution in data storage practices, sending a clear and precise message to governments, big tech and hackers that your data belongs to you and you alone, no longer will you stand to have your day to day life tracked, monitored and catalogued into a centralised database of information, susceptible to security breaches by hackers, accessible by big tech and governments who have little to no regard for the potential impacts of their actions when it comes to dealing with your most valuable digital assets.

I look forward to meeting and interacting with you in the Uplo Community.

Sincerely,

David Gilbert.