

# Ida



## The ida:// peer to peer protocol

The ida:// peer to peer protocol is named in honor of [Ida B. Wells](#)



[Ida B. Wells](#) was an African American teacher, journalist, civil rights pioneer and suffragist. Ida B. Wells was one of the founders of the NAACP. Over the course of a lifetime dedicated to combating prejudice and violence, and the fight for African American equality, Wells arguably became the most famous Black woman in America.

## IDA

The Ida protocol provides decentralized distributed secure file hosting and sharing with dynamic versioning. When files are added to the Ida protocol and shared with anyone in the Douglass

community all versions of the files are saved and are accessible to any member of the Douglass community that have been granted permission to access the files.

With Ida and the Douglass Browser you can Build and host decentralized and pages and apps without an internet services provider.

# Decentralized Mirroring

IDA is a decentralized protocol that designed to facilitate the exchange of pieces of a dataset into a network of peers. When a peer acquires it's first piece of data they can choose to become a partial mirror for the dataset. If a peer contacts them and needs a piece of data they have, they can choose to share it. This can happen simultaneously while the peer is still downloading the pieces of data they want from others.

## Ida Features:

- Ida's unique decentralized protocol gives communities the ability too: share, store, and distribute data where and when they want.
- Ida is designed to be the storage layer for fast, scalable, and secure decentralized applications.
- Ida is a decentralized filesystem that is designed to help you share files quickly and safely, directly from your computer.
- You can share entire filesystems with others using a single 32-byte key (i.e. `ida://uwd13d...`)
- With Ida files can be added or modified after a space is created, and peers can "watch" a drive for updates, meaning update notifications are dispatched to readers in realtime.
- By default, users only download the portions of files they need, on demand.
- With Ida you can easily stream media from friends.
- Seeking is fast and easy and there is no buffering.
- With Ida you can seek through a video and it will download only the portions of the video you're viewing, on-demand.
- Ida is designed to help you share files quickly and safely, directly from your computer.
- Ida comes with a secure transport protocol, making it easy to build fast and scalable decentralized applications.
- Dataset/file distribution and sharing happens simultaneously while a peer is still downloading the pieces they want from other peers.
- Ida reduces bandwidth costs as files and data become more popular, downloads are distributed across all available nodes.
- By decentralizing storage and distribution, Ida also increases speeds by downloading from many peers at the same time.
- Ida transfers files using state-of-the-art cryptography. Only users with your unique cryptographic key can access your files. Ida verifies the hashes of content on download,

so malicious content cannot be added.

- With Ida user privacy comes first. Services and Applications using the Ida Protocol have encrypted transfer, private data sharing, and content verification built-in.
- Decentralized Network Privacy - Ida guarantees end-to-end encryption of all shared content.
- When Ida sends data to a clusters of peers all of the data is synced within the clusters at the same time. Ida's distributed syncing allows for robust dynamic global archiving.
- Ida uses distributed append-only registers to store dynamic version history.
- Ida mirrors the state of a network peer and all of it's contents.
- Ida automatically maintains and updates built in version history when files are added to the network.
- Progressive Versioning - Ida enabled datasets can be synced in real time to multiple peers in the network.
- The Ida protocols Decentralized Redundancy gives the ability to transfer large amounts of secure data at scale.
- With Progressive Versioning, Ida guarantees that every node hosting Ida content has real time dynamically updated versions.

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