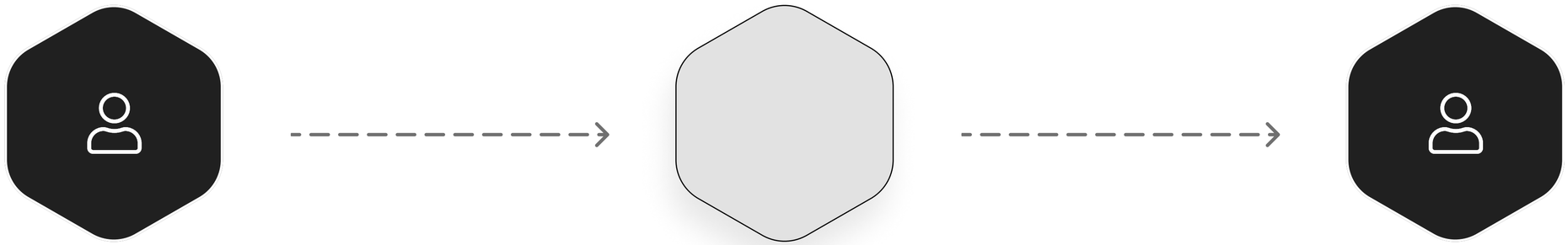
DatDot

own your data

“This is a story about the thing Big tech fears the most: technology operated by and for the people who use it.”

- Cory Doctorow, The internet Con

Web2 communication

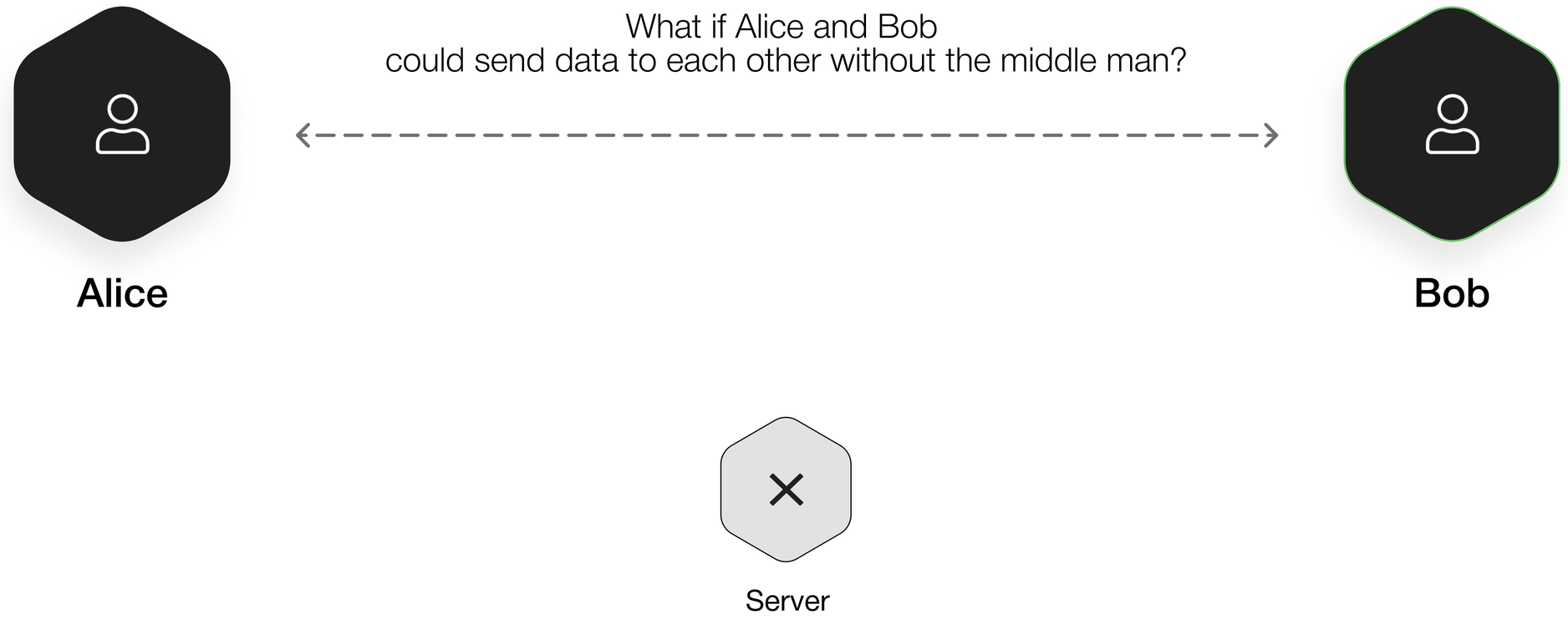


Alice
wants to share data
with Bob

Server (middleman)
Facebook, Google,
AWS servers etc.

Bob
wants to get data
from Alice

P2P direct communication



P2P data replication

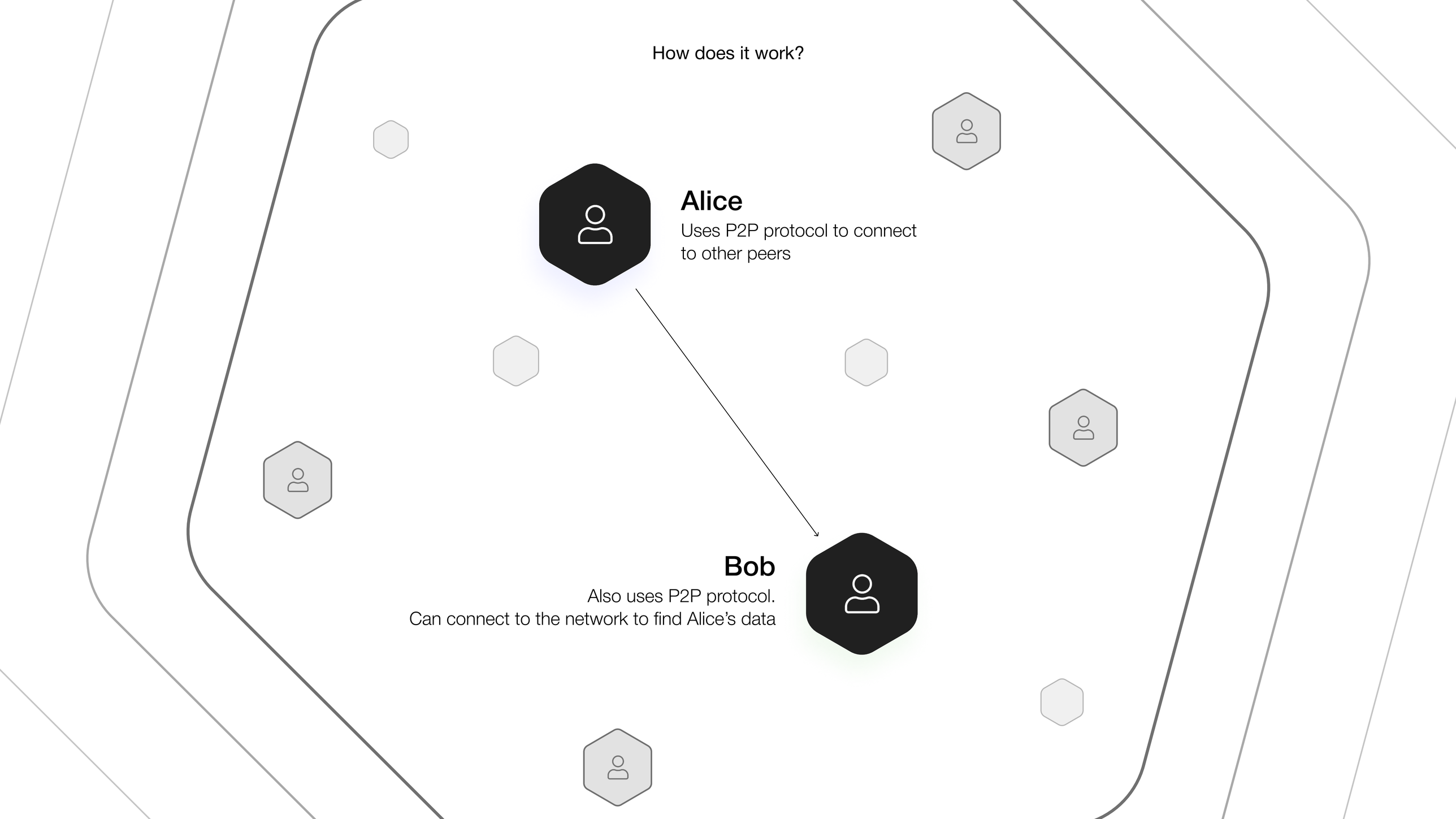
Alice

Stores data as an append only log,
then shares address with Bob

Bob

Can subscribe to Alice’s data
and get notified when Alice makes any update
and can replicate Alice's data to his device

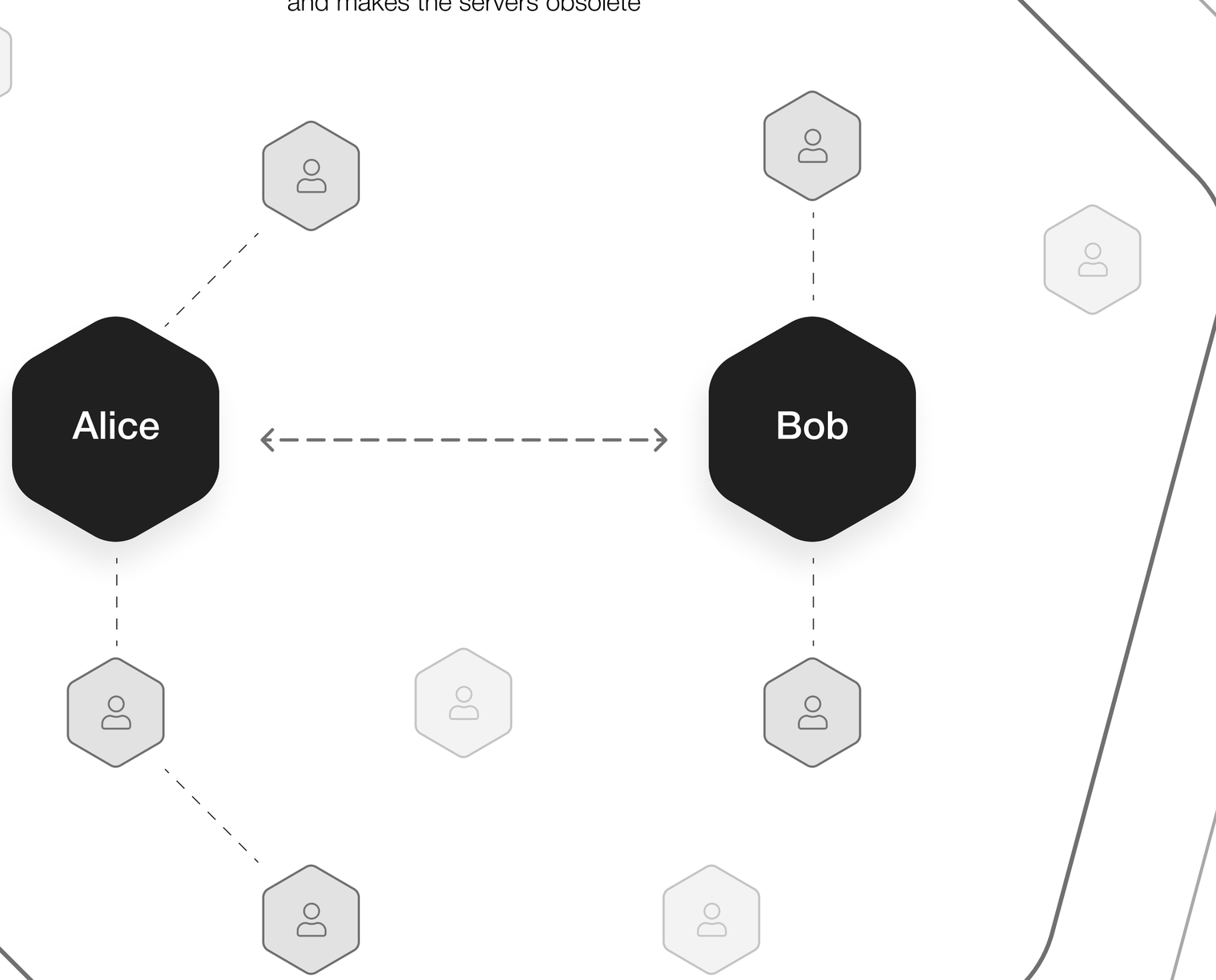
How does it work?



So, what is the core difference between
Peer-to-peer and Centralized system

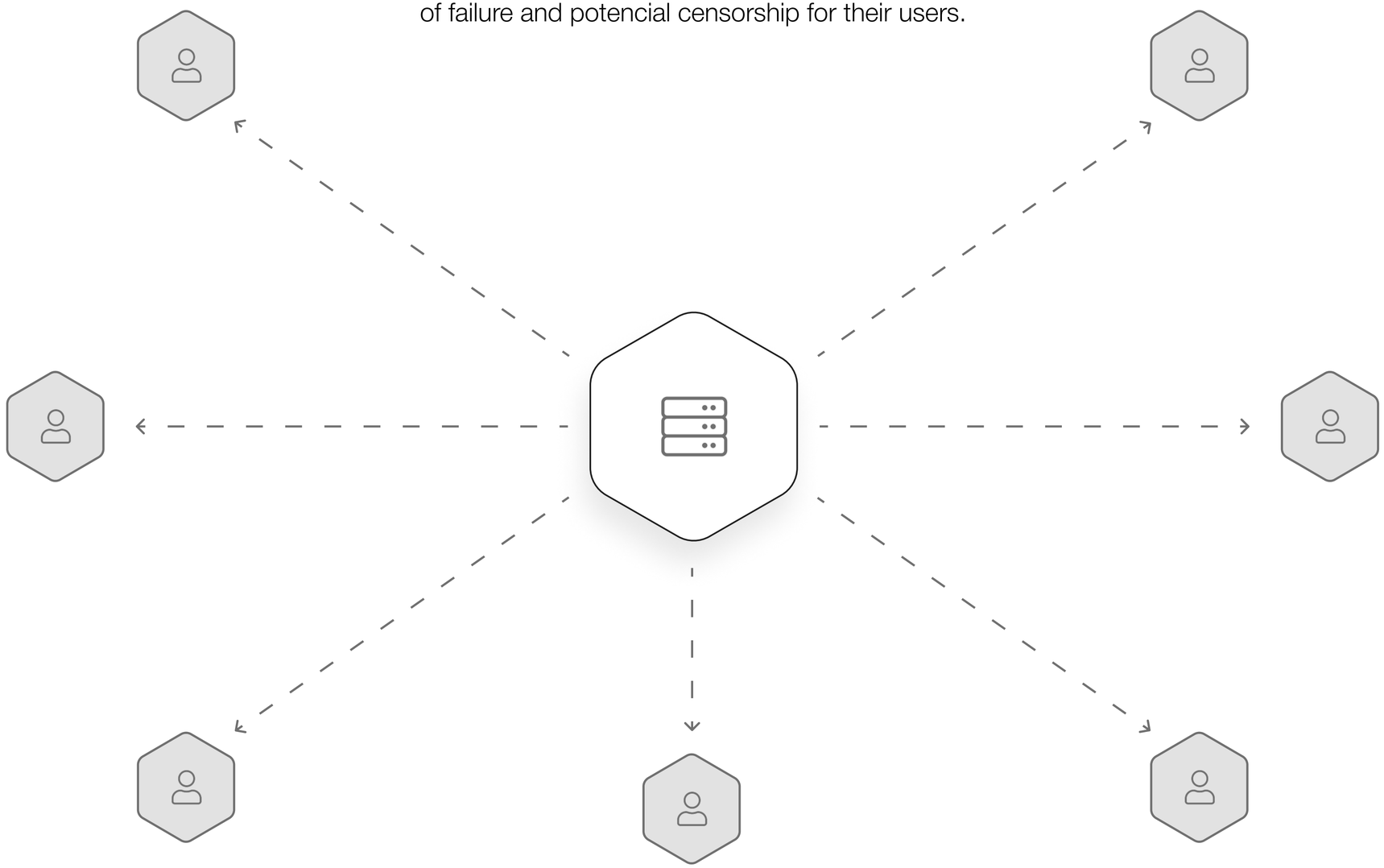
Peer-to-Peer

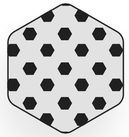
puts peers in full control over their data
and makes the servers obsolete



Centralized

The more data flows through the servers, the more costs do app creators have. Centralized apps represent a single point of failure and potencial censorship for their users.

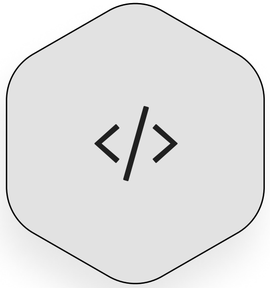




DatDot P2P developer toolset

User Data Vault

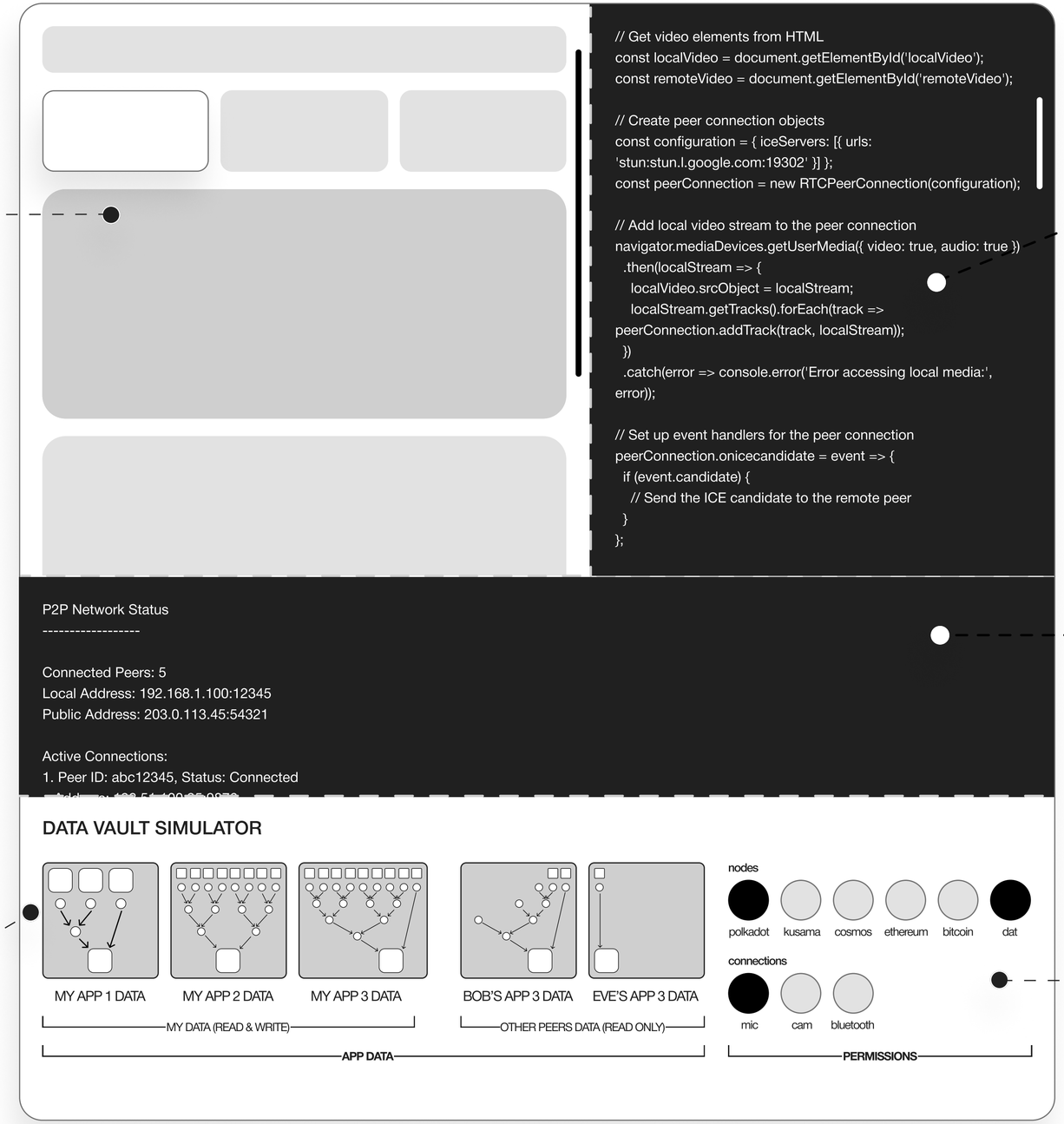
own your data



In-browser Editor

P2P Hosting Network

In-browser editor



APP PREVIEW

Developers can design the app ui and test the functionality

CODE

Developer uses data vault standard and P2P and blockchain APIs to build apps that don't require a server

Console

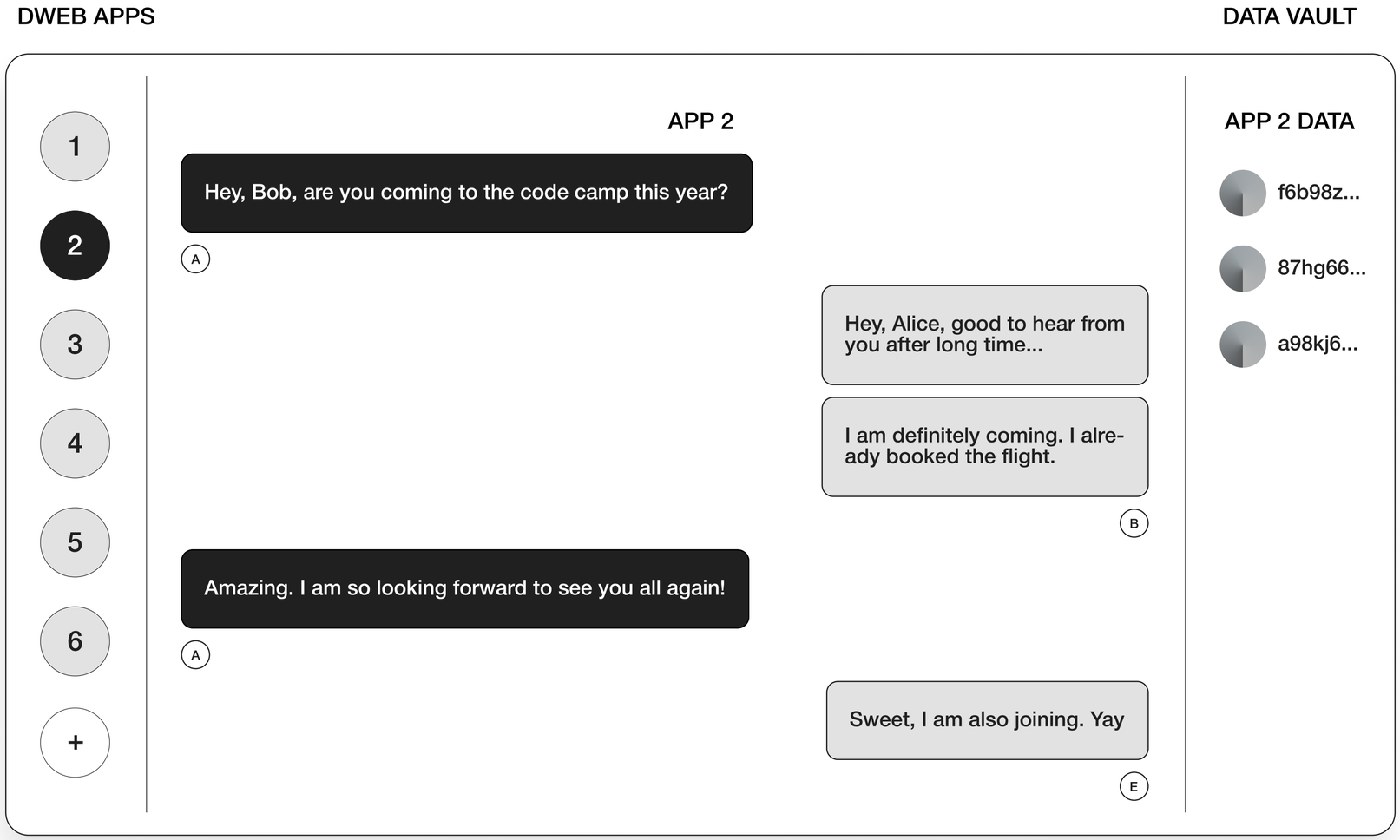
Terminal with logs for debugging

This enables all app's data being stored on user's devices

Developer can wire up the app to use different decentralized services i.e. blockchain, p2p networks etc.

Data vault

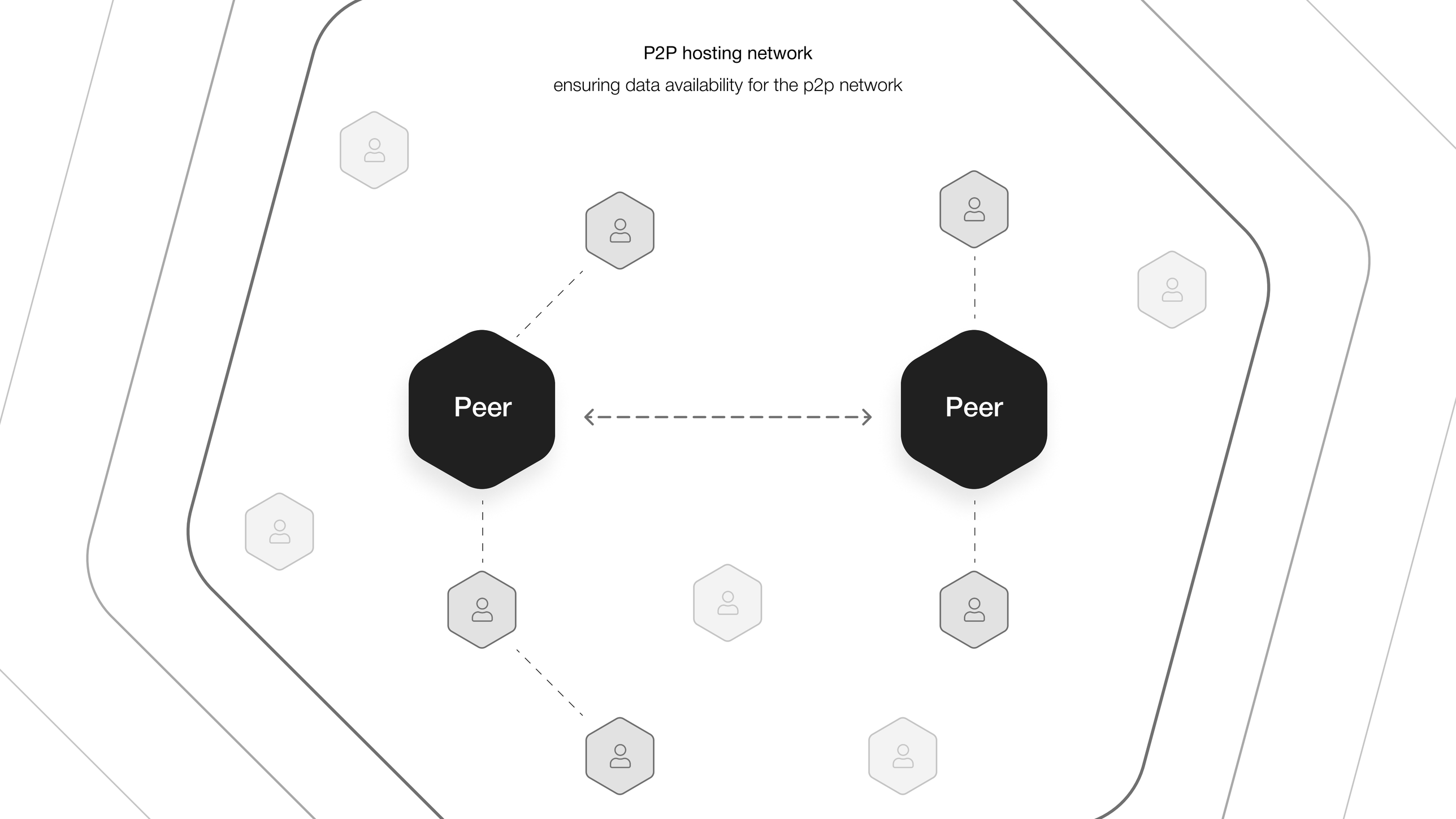
User can browse and load any app built using data vault standard



- Files and folders created in APP2 are stored on user's computer, instead of APP's server
- All users store data on their computer
- If any user is offline, they use p2p hosting network to make sure their data is always available to other users

P2P hosting network

ensuring data availability for the p2p network



Why do we need DatDot hosting network?

When Alice is offline, she can find seeders who can seed data on her behalf. DatDot network pairs customers like Alice to seeders who offer their service and their storage to the network. Seeders' job is to store the data on their devices and serve it to the interested readers.

Marketplace for p2p hosting

Sponsor

pays for having more seeders and data availability when they are offline

Marketplace for p2p hosting

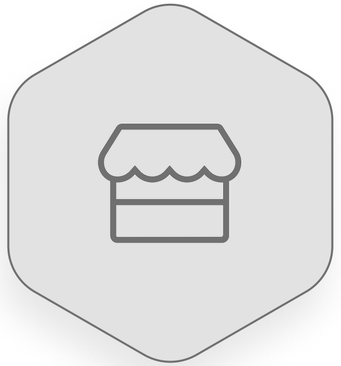
Sponsor

Seeders

get compensated for storing data on their devices and serving it to interested readers

Marketplace for p2p hosting

Sponsor

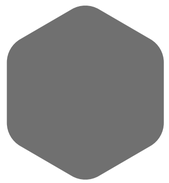


DatDot Network

- Connects sponsors with seeders
- Monitors the work of the seeders
- Compensated seeders for their work

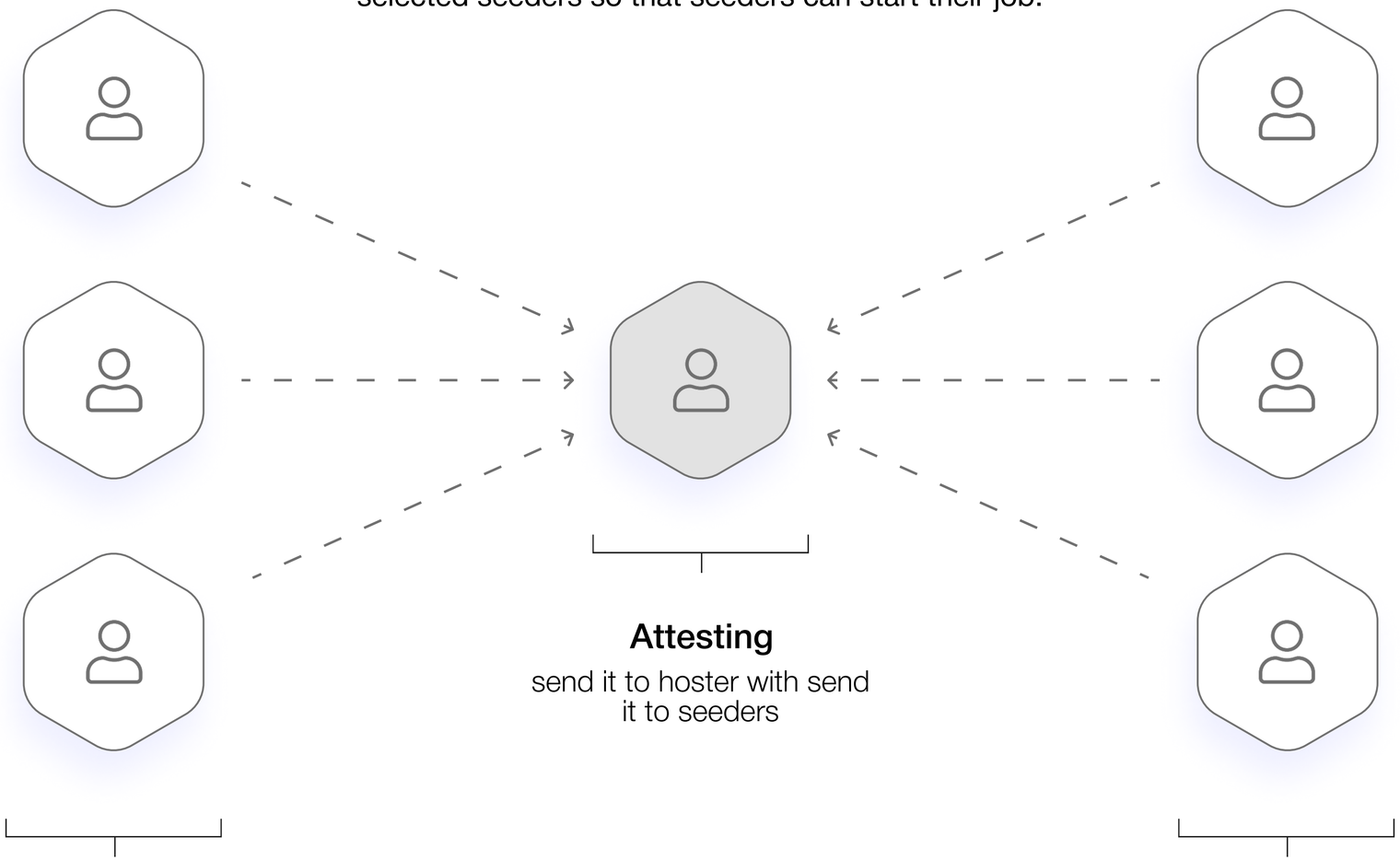
Seeders

How do processes in P2P hosting network work?



Hosting setup process

Sponsor initiates the seeding setup process and the network selects peers to encode, attest and finally get the data to the selected seeders so that seeders can start their job.



Attesting

send it to hoster with send it to seeders

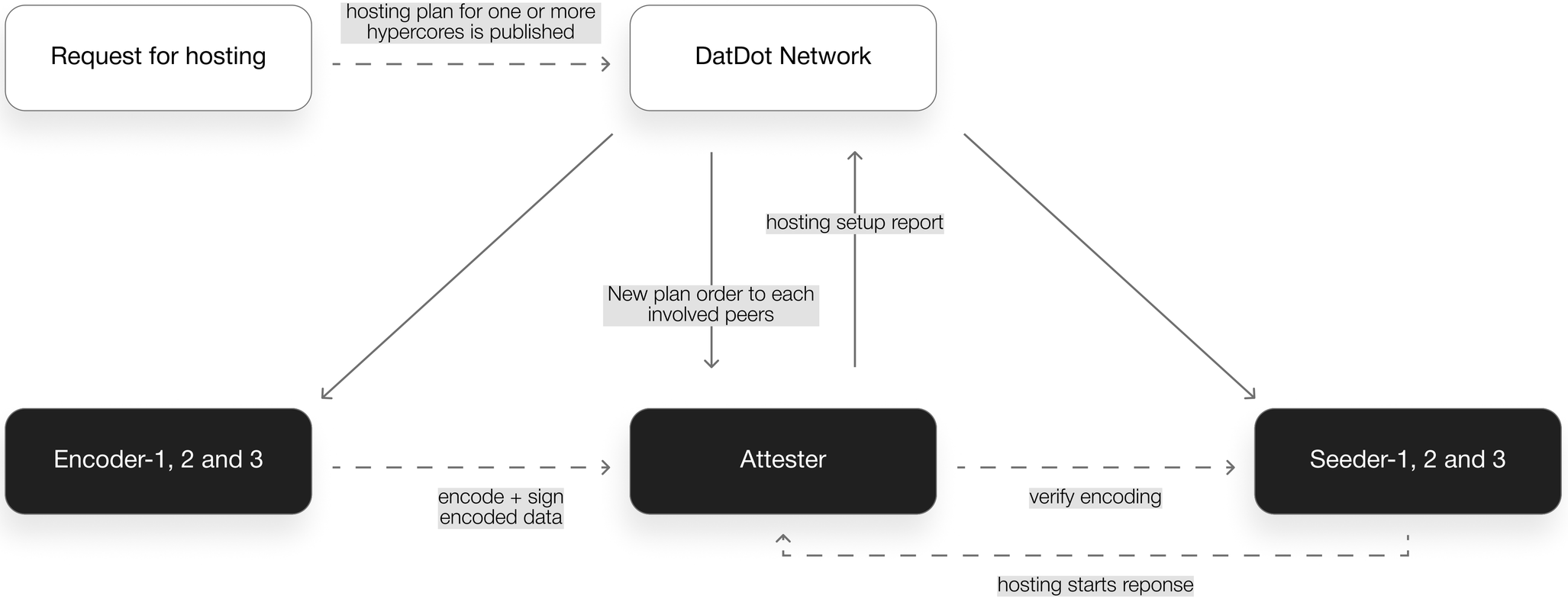
Encoding

compress and sign compress data

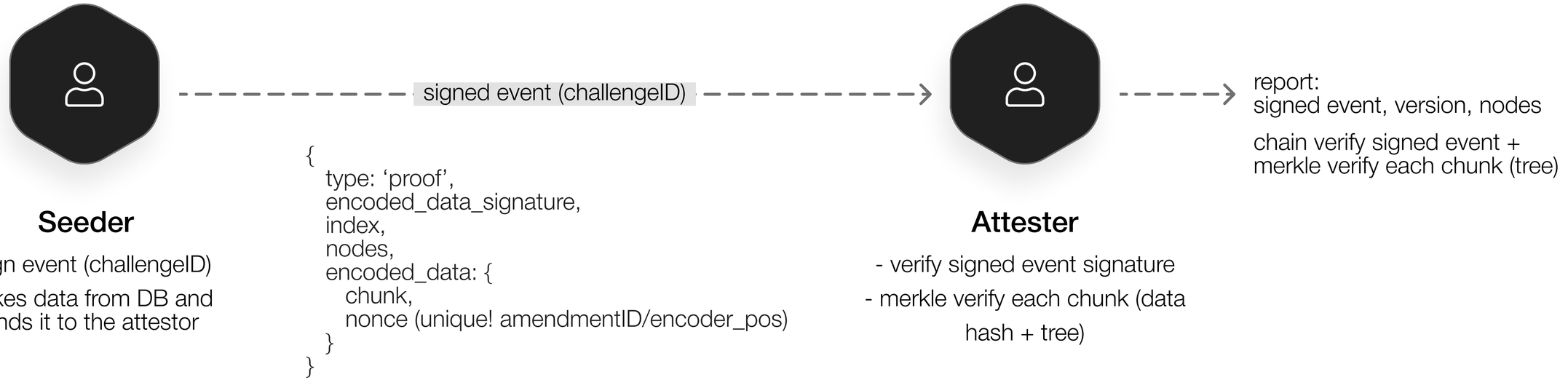
Seeding

store compressed data and serve it on request

Hosting setup process



"Proof of storage" attestation



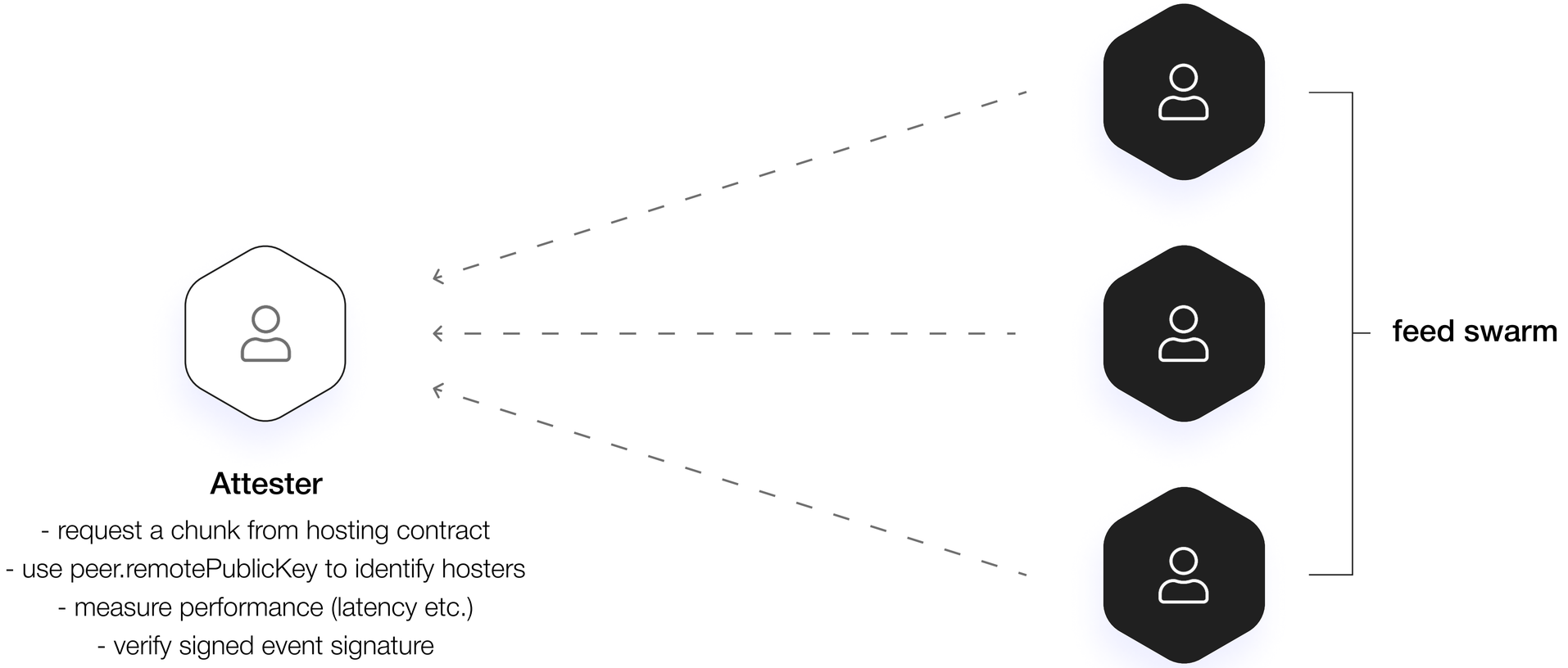
Seeder

- sign event (challengeID)
- takes data from DB and sends it to the attestor

Attester

- verify signed event signature
- merkle verify each chunk (data hash + tree)

"Proof of performance" attestation

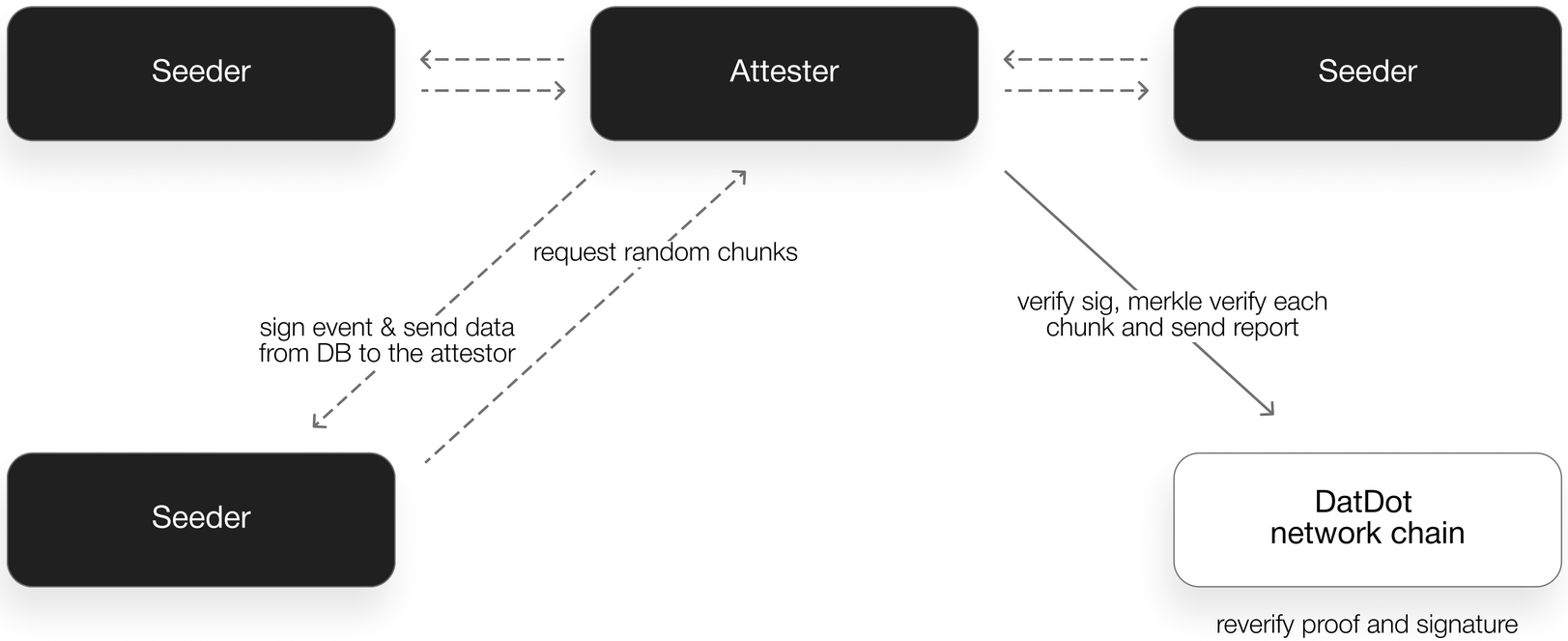


Attester

- request a chunk from hosting contract
- use peer.remotePublicKey to identify hosters
- measure performance (latency etc.)
- verify signed event signature

- sign event (challengeID)
- take data from DB decompress it and send it to any requestor in the swarm

"Proof of performance" attestation



Thank You!!

DatDot

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