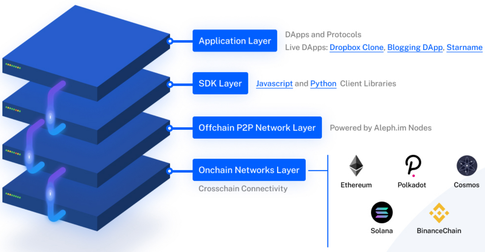
aleph.im

Your crosschain
decentralized cloud

Solution Stack

Layers structure the whole solution



The two bottom layers are a unique blend of onchain and offchain decentralized technologies

Offchain P2P Network Layer

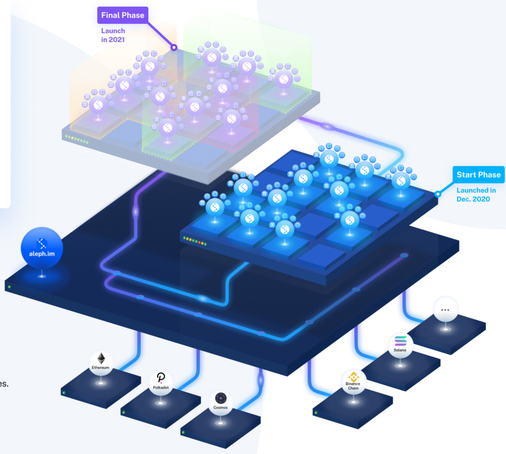
Start Phase

A custom network powered by core channel nodes

Core Channel Nodes

- Stake
- Always Get Reward
- Database
- File Storage
- Network Control / Mgmt
- Network Validation

Launched in Dec. 2020



IPFS Compatible

Data can also be replicated on IPFS.

Private Data

Data is private and encrypted by default but can be made public (unencrypted) by users themselves.

Availability & Scalability

Data is only replicated across nodes for availabilty. Replication is limited for scalability.

*The network features zero transaction fees and **transaction speeds of 50-100ms***

Onchain Networks Layer

Blockchains enable interactions with aleph.im network

Crosschain Connectivity

Data Storage

Data is stored on nodes of the aleph.im network and messages are stored onchain.

Message Content

Metadata such as sender, hash, signature, time.
The data, otherwise the hash is used to fetch the data from aleph.im nodes or IPFS.

Message Signature

Messages are signed using any of the chain addresses verified on the network.
A message origin is verified by checking if it comes from the address that signed it.

Batched Transactions

Onchain transactions are grouped, so fees are tiny.

Delegated Transactions

Transactions are managed by the network. No need to manually resubmit them, nor adjust gaz, etc.

Onchain Fees

Onchain transactions are free for users as long as someone (dApp developer, user himself, protocol) incentivizes the storage

Offchain P2P Network Layer

Final Phase

Core Channel Nodes & Resource Nodes power the network

Resource Nodes

- Get Reward If Working
- Database
- File Storage
- Computing

Launch in 2021

+

Core Channel Nodes

- Stake
- Always Get Reward
- Network Control / Mgmt
- Network Validation
- Dispatch workload
- Computing
- Database
- File Storage

Upgrade in 2021

Channels

Channels can overlap with one another, sharing one or more nodes.

Channels enable sharding.

Sharding

Shards are subnetworks with all the aleph.im network features.

Sharding allows projects to create their own dedicated cloud clusters.

- medium.com/aleph-im
- twitter.com/aleph_im
- t.me/alephim
- github.com/aleph-im
- linkedin.com/company/aleph-im

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