ARCHIPEL

Divide And Federate

Decentralized infrastructure

- Take back control on communications, data and transactions

- Without third-parties

- Through a peer of the network.

P2P - Through a peer ?

- **Who own peers ?**
  - Network control
  - Service execution
  - Gateway to the Network

Effective (de)centralization ?

- **Physical** (de)centralization :

    How many computers the network is composed of

- **Political** (de)centralization :

    How many individuals or organisations are really controlling these computers.

Effective (de)centralization ?

- Ethereum context :

  - 70% of nodes in VPS

  https://twitter.com/DAppNode/status/1108693643320270848?s=20

  - 63% dapps used Infura

  https://medium.com/fluence-network/dapp-survey-results-2019-a04373db6452#889e

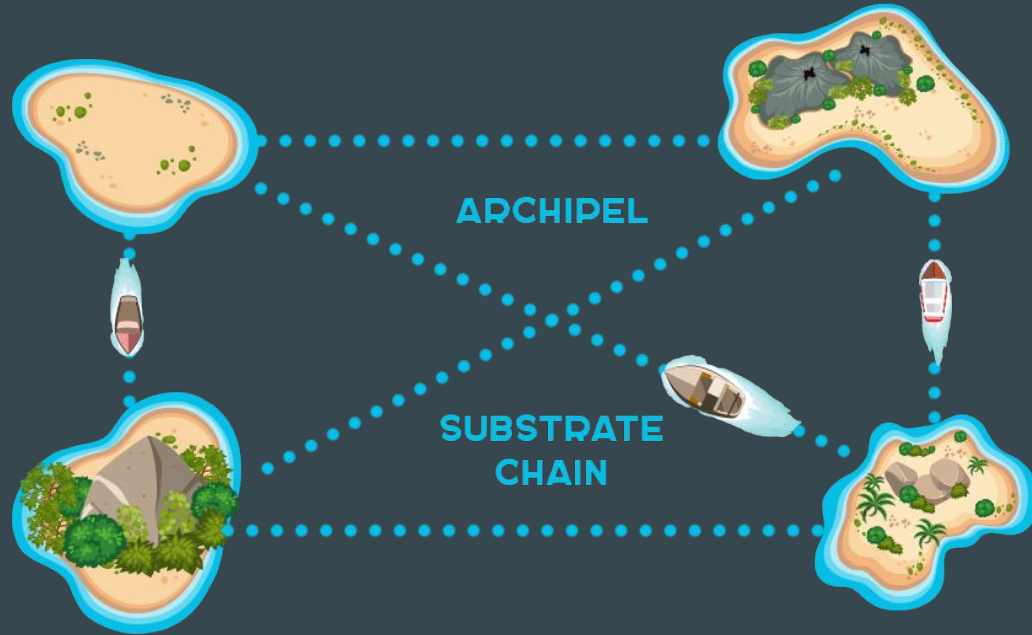## Cloud: Simplicity and High Availability

High Availability

- Challenge to resolve:
  - Power or network connexion shutdown
  - Hardware issues
  - Software issues
- On cloud provider cloud
  - Deployments, electric and network redundancy
  - Multiples geographic zones
- At home ?

How to achieve HA on decentralized infrastructure

Federate friends and family peers to ensure **High Availability** for services

Archipel - Archipelago

Run **unsinkable** services and keep the **decentralization** !!

Archipel - the delivery

Archipel is a **high availability solution** for running services on **decentralized federated** hardware at home
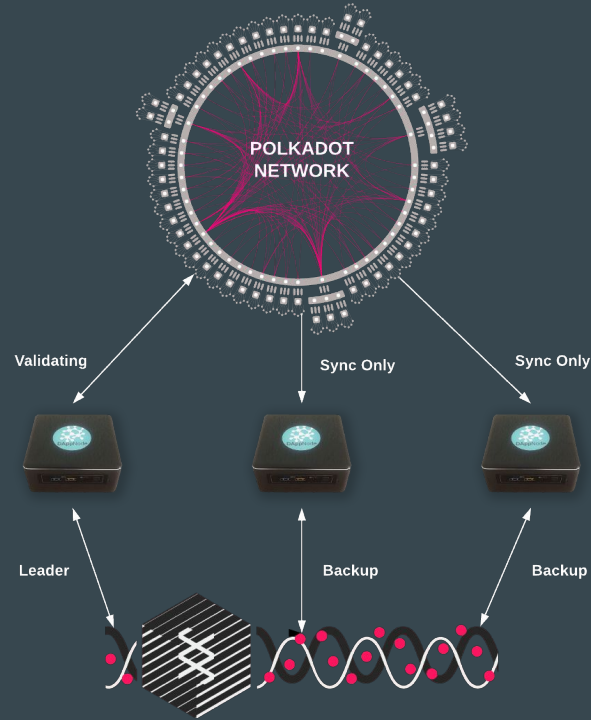
Archipel - the driving force

Archipel a solution to federate light infrastructure to access passive income from blockchain services.

Archipel - lookout tower vision

Archipel design boxes, at home,
gathered into **micro-federation**,
gateway to the **p2p economy** for your friends and family.

First supported service : High Availability Polkadot Validator

Archipel Substrate Chain
State Synch + High troughput consensus on validator leadership

Archipel build on

DAppNode

Substrate

Archipel components :

- **Chain**: Shared state of the federation and used to synchronize orchestrators. Substrate framework.

- **Orchestrator**: Decision making program that start or stop the external service in active or passive mode.

- **CLI**: Generate configuration zip file to bootstrap federation and HA service

- **UI**: Administrate and visualize the federation state

- **Deployer**: E2E tests, build scripts and deploy tools

- **DAppNode** : package install in one click.

Thanks!

https://archipel.id

https://github.com/luguslabs/archipel

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