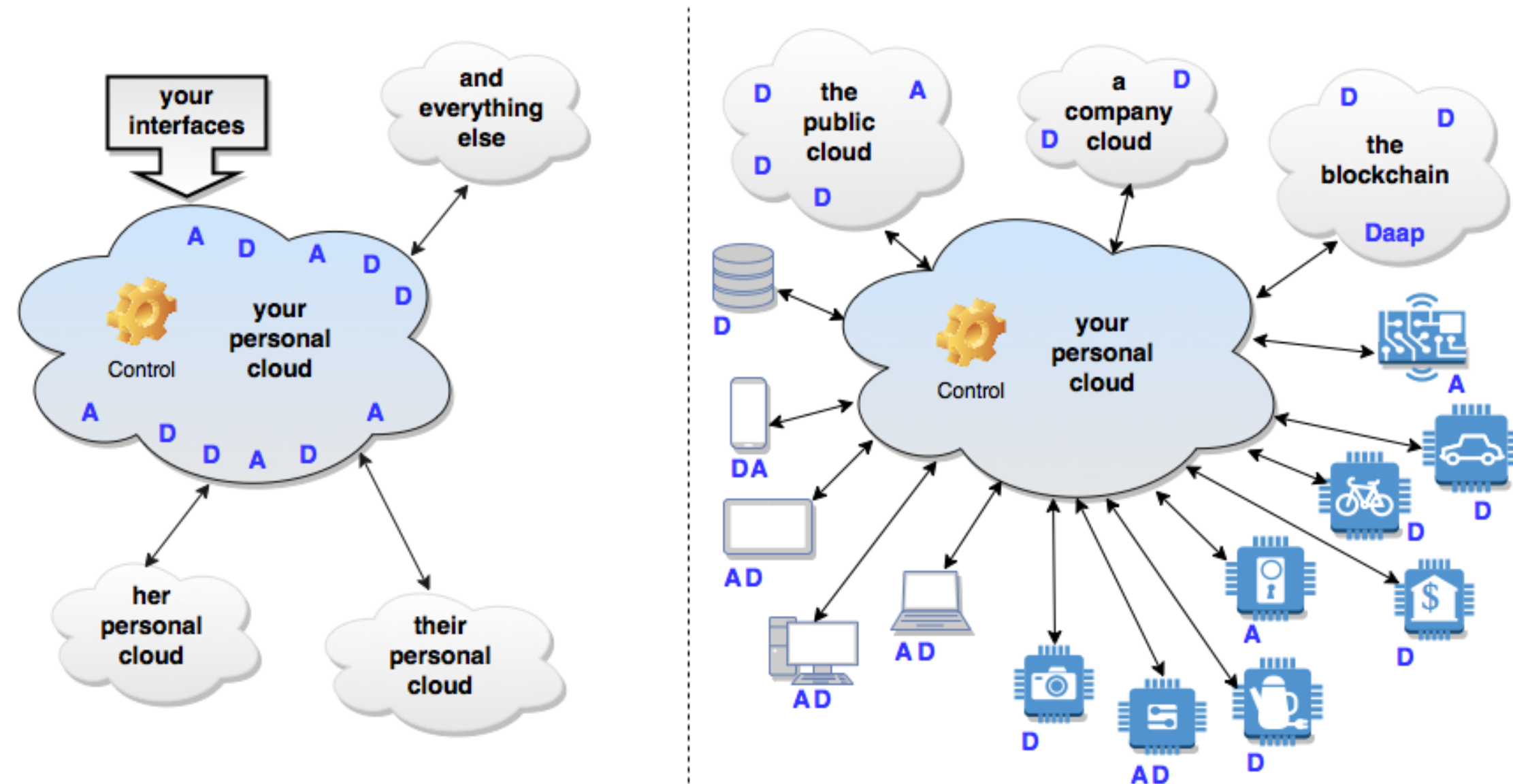


Personal Cloud Ecosystem

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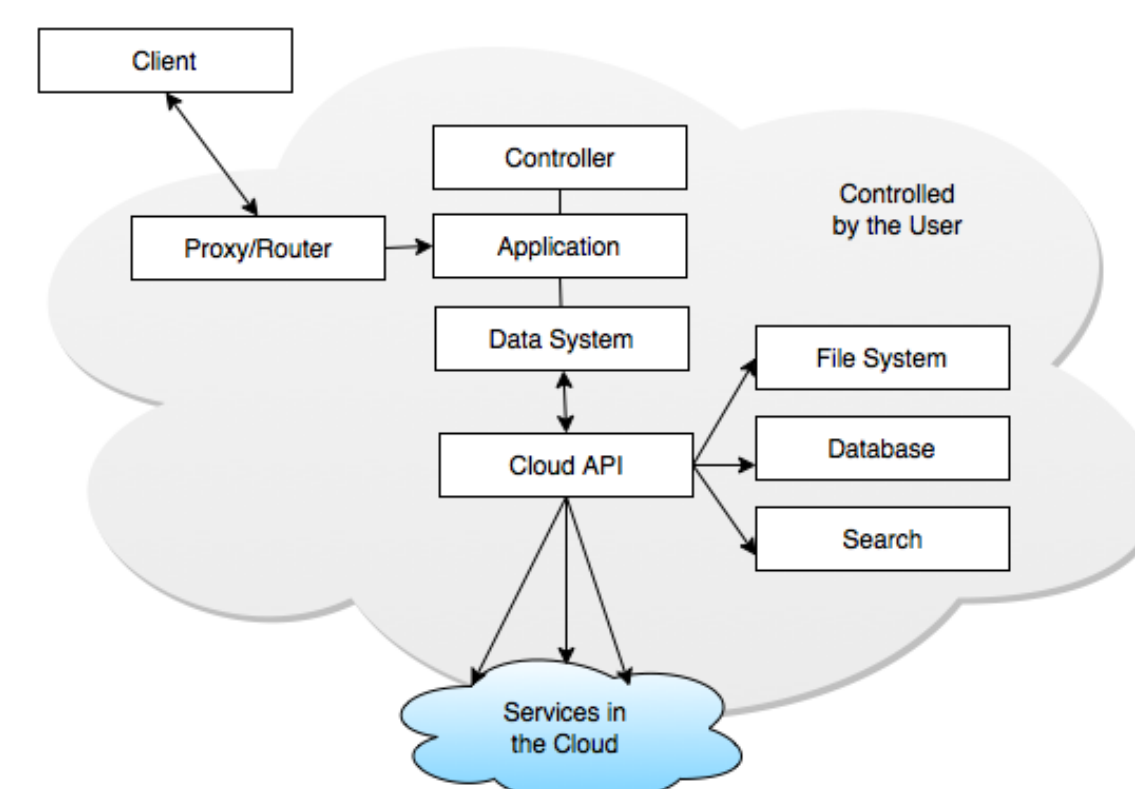
Personal Cloud



Key to the drawing
 D your Data
 A your App
 Daap your Decentralized Application

abstract concrete

Personal Platform as a Service (PaaS)



The main purpose of the Personal PaaS is to make it easy to permission and manage distributed personal data. This architecture puts users back in control of their data while making it easier to create data rich and scalable applications. In an ideal architecture, user data is proxied through the user's data store. This enables a single API endpoint for personal data

Motivation

Explore the user-centric personal cloud paradigm:

- A cloud-based platform the individual owns and controls
- Secure, lifetime data repository with NO ambiguity in terms of who controls the data
- A platform for applications – much like a PC or smartphone but running in a decentralized lightweight solution that may run on a self-hosting infrastructure (with no central company or point of control) or in the cloud, and accessible from all devices

Innovation

- Decentralized solution
- Security based on blockchain technology
- Focus on personal cloud interoperability
- Personal PaaS (platform as a service) to permission and manage distributed personal data
- Use next-generation virtualization technologies based on 'containers'

Objectives

- Create a truly interoperable personal cloud network, similar to today's interoperable email network
- Assemble a set of open-source software components and open standards to provide cutting-edge services in the field of online identity, personal data, and experimental communication patterns
- Give individuals control over their information, and allow them to freely establish their own ecosystem

Status

- Implementation of an appropriate framework for building and deploying personal clouds. Validations based on simulations and prototype evaluation (2014 - 2015)
- Proof-of-concept in which users authenticate through a 2FA (Two-Factor Authentication) mechanism based on QR Code and the blockchain (2015)
- Proof-of-concept in which users authenticate through a mechanism based on JSON Web Tokens (JWT) and the blockchain (2015)
- Proposal of a fully decentralized identity management solution for the personal cloud based on the blockchain (2016)