

Dynamic Data Sharing Hub Flyer

Summary: Dynamic Data Sharing Hub (DSH) represents an architecture to facilitate data collection, capture, and exchange under the rules and regulations of decentralized Data Governance Authorities (DGA) acting on behalf of the organizations and data subjects they serve. DGA manage their own DSHs under set governance rules for how data can be accessed, queried, and consumed. A DSH acts as a mediator between data subjects and data consumers in a user-centric and privacy-preserving way. Demos available at the following links [Criteria search](#) and [Patient Recruitment](#).

Functionalities: introduces innovative data management capabilities for building [distributed data meshes](#). DSH provides the following characteristics:

| Characteristic | Description |
|-----------------|---|
| Discoverable | Being able to discover specific information within a given data hub |
| Authentic | Being able to verify the provenance of data |
| Self-Describing | Being able to understand the context of attributes. <i>Data harmonization terms as granted by the data subject. DSH can operate on raw data and meta-data thanks to OCA and acts as a conduit between the data subject and data consumer without accessing or processing data.</i> |
| Secure | Cryptographically secure data flows, data provenance, consent and decentralized SSI |
| Interoperable | Network and ecosystem agnostic with sets of open interfaces to expose data flows and allow for easy integration between legacy systems and clustering DSH across industries |
| Consent tooling | Unique features of DSH: a transactional tool for cryptographically-linked data payloads and associated consent |

Key Components: required for DSH

| Component | Description |
|---|---|
| Decentralized Storage: DefraDB | for the data persistence layer, a distributed storage solution for a decentralized data ecosystem. |
| Data Harmonisation - DefraDB - GraphQL | <ul style="list-style-type: none"> - DefraDB leverages Overlays Capture Architecture (OCA) to provide harmonized data for all interacting participants and a unified data interface for contextual data queries. - GraphQL for DSH data queries, a flexible replacement for REST APIs, allowing entities to find and query any self-described data sets utilising OCA. |
| Identification & Authentication - KERI - ACDC | <ul style="list-style-type: none"> - KERI (Key Event Receipt Infrastructure) preferred DKMS; a truly decentralized and SSI system, necessary for privacy and security, enabling a safe and secure data governance infrastructure built on strong cryptography. - ACDC (Authentic Chained Data Containers) for porting authenticable data, including Verifiable Credentials and other transient container solutions. |
| User Interface TDA | - TDA (Trusted Digital Assistant) for user interface with interconnected components while enabling secure peer-to-peer communications with other connected parties. TDA also manage identity, data and consent. |
| Infrastructure agnostic | Agnostic to any underlying infrastructure . Can run on existing cloud (AWS,Azure, OVH, G-Cloud) or on-premise solutions thus making it scalable and adaptive. |

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