

DS3 COMPOSER

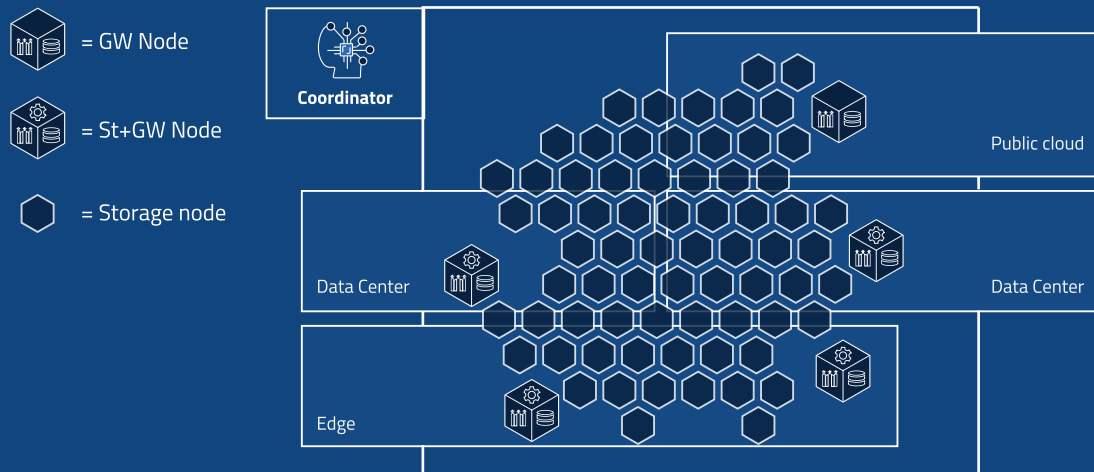
Cubbit's DS3 Composer allows you to build your own cloud storage in minutes while keeping control over data, infrastructure and cost.

Based on DS3 technology, Cubbit's DS3 Composer is the ultimate tool to create your own geo-distributed cloud service. It enables the access to the SaaS control plane of DS3, helps you to collect and organize new and recycled resources across the network, and exposes them as an Object Store.

Cubbit's DS3 Composer offers all the benefits of traditional cloud services and on-premises products while minimizing the drawbacks and reducing operational costs for the best overall total cost of ownership (TCO), resiliency, ransomware protection and data sovereignty.

Resources are organized in geo-distributed networks and each node of the network can provide both capacity and access via S3 protocol.

Cubbit Swarm Logical Layout



A cloud with data and infrastructure sovereignty

Hardware flexibility

Cubbit DS3 nodes can run on any hardware or virtual machine. The user can decide to reuse existing resources or add new ones. Data is distributed across all nodes to preserve the highest service availability and data integrity.

Private and public S3 access

Cubbit DS3 offers the possibility to access data through local or public access points, depending on business needs and use cases.

Ease of use

Cubbit DS3 comprehensive web interface enables users to create and manage an object store with just a few clicks.

Multitenancy

Cubbit DS3 is fully multi-tenant. Each tenant can be operated by a different user (or reseller), who has full control of all aspects of the storage resources, configuration, users, and policies.

Benefits of the solution

Zero-knowledge privacy

Cubbit DS3 is designed in a way that only the user has access to the stored data and to the keys to encrypt and decrypt it.

Geo-redundancy by design

Every data stored is encrypted (AES-256), fragmented, and replicated in the network.

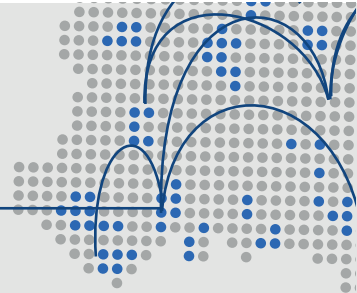
Digital sovereignty

Geo-fence the area where data is stored, addressing nations' specific data sovereignty concerns and checking all the compliance boxes (e.g., GDPR, ISO).

Ransomware protection

Cubbit DS3 is compatible with Object Lock and Versioning S3 APIs, protecting the users' data against tampering.

How Cubbit DS3 technology works



#1 Encryption

First, data is encrypted with AES-256, a military-grade encryption standard frequently used in cloud storage.

#2 Splitting

The encrypted data is fragmented into N chunks, each indistinguishable from one another.

#3 Redundancy

These N chunks are multiplied into K shards via Reed-Solomon error-correcting codes.

#4 Geo-distribution

Each shard is spread across geo-distributed networks.

This ensures that files remain inaccessible in the event of individual node breaches, as no information is stored anywhere in its entirety. Also, if a hacker accesses and encrypts a network node, the service will keep working without interruptions.

Please note that, you only need a subset of shards to download a file from DS3's geo-distributed cloud storage network. Suppose a node from the Swarm goes offline. In that case, its fragments are automatically redistributed, and the DS3 Coordinator promptly repairs the node, all without ever gaining access to the shards.

Use cases

Backup and recovery: Local performance with global resiliency.

Active archiving: Low cost and long-term retention.

Log management: Import logs from everywhere and consolidate them for analysis.

Content delivery: Bandwidth optimization and better user experience.

Internet of things: Scalability and single data domain at the edge.

AI/ML: Enable next-gen applications.

Surveillance: Safe data storage for your global security and compliance needs.

Data analytics: Store at the edge, analyze in the cloud.



Cubbit, a partner of Gaia-X, is Europe's first geo-distributed cloud object storage. Its groundbreaking technology addresses nations' specific data sovereignty concerns, helping businesses check all the compliance boxes (e.g., GDPR and ISO) while ensuring data control and providing hyper-resiliency against ransomware and disasters.

Today, Cubbit technology is adopted by 5,000+ customers, partners, and companies in 70+ countries.