Ceph

Ceph is a distributed file system decoupling metadata and data operations, and also it removes tables related file allocation. Metadata server(MDS) processes metadata operation such as open, rename. Object Storage Device(OSD) processes file I/O operation such as read, and write. ODS is intelligence which means that it can deal some of tasks to distribute the complexity occurred by accessing data. By dividing metadata and data parts, the two things can get a scalability and high-performance. To guarantee well-distributed data, it proposed a scheme called CRUSH, and to provide reliable replication, it uses a primary-backup protocol.