

Alibaba Cloud Hybrid Cloud Distributed Storage

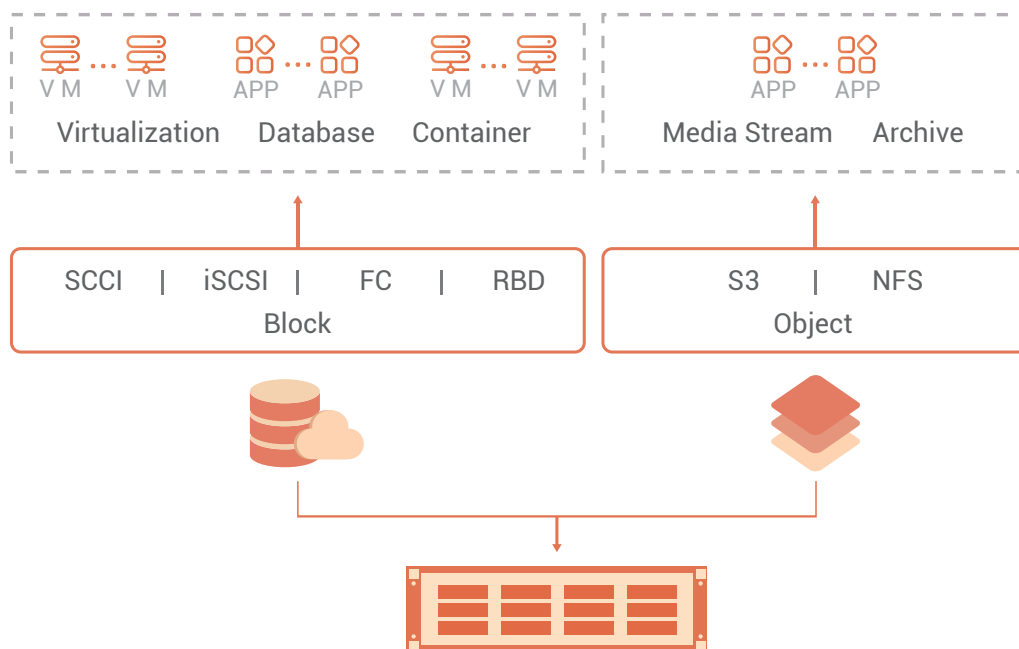


Overview

Hybrid Cloud Distributed Storage is a storage product based on a distributed architecture. The product gives you the ability to increase the number of nodes to achieve linear growth in storage capacity and performance and supports common storage protocols such as iSCSI, OSS, S3, NFS, and CIFS.

Hybrid Cloud Distributed Storage integrates the leading software-defined storage (SDS) technology and the best practices of public cloud deployment and O&M. It provides customers with high performance, high scalability, and high reliability. It helps you improve efficiency, reduce costs, and accelerate business development and allows you to build your hybrid cloud storage with ease.

Product Architecture



Benefits

Flexibility and scalability

- Hybrid Cloud Distributed Storage provides a minimum of 3 nodes and supports elastic scaling. You can increase the number of nodes to achieve linear growth in storage capacity and performance.
- Support for EB-level scalability.
- Integration of hybrid cloud features. It allows you to seamlessly migrate data to Alibaba Cloud.

Stability and reliability

- Hybrid Cloud Distributed Storage provides comprehensive measures to guarantee data security and reliability.
- A guarantee of strong data consistency.
- Integration of the SDS features to reduce the complexity and costs of O&M.

- Ease of use
 - Hybrid Cloud Distributed Storage allows you to efficiently build a data center.
 - Full-lifecycle data services to support business growth.

■ Features

1. Optimizes performance to process a large amount of data

Hybrid Cloud Distributed Storage meets the needs of various OLTP or OLAP applications. It provides optimized performance in reliability, ease of use, and manageability. It is designed for 24/7 mission critical environments and you can use Hybrid Cloud Distributed Storage to store large amounts of data.

Hybrid Cloud Distributed Storage supports automatic deployment and one-click installation. You can deploy resources by using the graphical interface. User-friendly management tools are provided to improve efficiency. RESTful API operations are also provided to integrate the storage management feature into the IT platform. This improves O&M efficiency.

2. Allows you to use software as needed and flexibly deploy your data center

The distributed architecture enables the horizontal scaling of storage capacity and performance. Hybrid Cloud Distributed Storage supports multiple storage protocols, such as block storage protocols, object storage protocols, NAS, and HDFS. Hybrid Cloud Distributed Storage meets the needs of traditional enterprise applications and private cloud platforms. You can also use Hybrid Cloud Distributed Storage to store large amounts of unstructured data.

3. Supports multi-cloud environments

Hybrid Cloud Distributed Storage supports mainstream cloud and enterprise virtualization platforms, such as OpenStack, VMware ESXi, ZStack, KVM, and Microsoft Hyper-V. It supports the latest container ecosystem with certified CSI drivers.

4. Supports mainstream storage protocols

Block storage: Hybrid Cloud Distributed Storage supports SCSI, RBD, iSCSI, and FC protocols. The product supports a wide range of virtualization platforms and database applications whilst meeting the needs for storage area network (SAN) services when you deploy cloud infrastructure and databases or develop and test applications.

Object storage: Hybrid Cloud Distributed Storage provides APIs for Alibaba Cloud Object Storage Service (OSS) and S3. Hybrid Cloud Distributed Storage is seamlessly integrated with the object storage services and meets the needs of multi-media storage, backup, and cloud archiving. In addition, Hybrid Cloud Distributed Storage support mainstream backup software and is applicable to on-premises backup scenarios.

File storage: Hybrid Cloud Distributed Storage supports NFS, CIFS, and FTP protocols. It is able to provide high performance and significant horizontal capabilities, as well as allowing you to store and share unstructured data resources. Hybrid Cloud Distributed Storage is applicable to the storage, backup, and archiving of a large amount of data.

5. Provides the intelligent cache acceleration feature to improve I/O performance

Hybrid Cloud Distributed Storage provides a high-performance cache acceleration engine. Cache acceleration is implemented at two levels, including RAM and SSD caches. For the RAM read cache, an enhanced read-ahead algorithm of Alibaba Cloud is used to improve the read performance. For the SSD read/write cache, an intelligent I/O merging algorithm and a hot data-specific analysis algorithm are used to improve the read/write performance when you process OLTP business.

6. Provides enterprise-level QoS settings to dynamically distribute resources

Hybrid Cloud Distributed Storage provides quality of service (QoS) settings at the volume level. You can set the maximum number of input/output operations per second (IOPS) for storage volumes and set performance limits to prevent system exceptions, thus ensuring optimal user experience. You can use QoS settings for data recovery as well as setting the minimum and maximum bandwidth of storage pools. You can also set bandwidth thresholds for clients. This ensures that online services are not affected by data recovery. Hybrid Cloud Distributed Storage supports modifying QoS settings online in real time, helping administrators and upper-layer application developers dynamically distribute performance resources. Hybrid Cloud Distributed Storage is applicable to various scenarios.

7. Provides high reliability to ensure business continuity

Hybrid Cloud Distributed Storage provides advanced features and optimized reliability solutions. To achieve data redundancy, Hybrid Cloud Distributed Storage provides the multi-replica and erasure coding (EC) policies. Specific data storage policies can be set based on performance or storage capacity. Hybrid Cloud Distributed Storage supports redundancy of multiple management and control nodes. It also supports the 4-path I/O feature. You can set multi-level data protection for storage clusters by managing topologies. The security levels include the node level and rack level. The data protection policies ensure system reliability and business continuity.

8. Provides advanced storage features to meet various business requirements

Hybrid Cloud Distributed Storage provides advanced features to meet the storage management requirements of enterprises in various scenarios. The features include multi-policy redirect-on-write (ROW) snapshotting, snapshot link cloning and standalone cloning, thin provisioning, and online scale-out or scale-in.

■ About Alibaba Cloud

Established in 2009, Alibaba Cloud (www.alibabacloud.com), the digital intelligence and technology backbone of Alibaba Group, is among the world's top three IaaS providers, according to Gartner. It is also the largest provider of public cloud services in China, according to IDC. Alibaba Cloud provides a comprehensive suite of cloud computing services to businesses worldwide, including merchants doing business on Alibaba Group marketplaces, start-ups, corporations and public services. Alibaba Cloud is the official Cloud Services Partner of the International Olympic Committee.

<https://www.alibabacloud.com/product/hybrid-cloud-distributed-storage>

