

Migration from on-premises NAS to Object Storage

Overview

Network Attached Storage (NAS) file systems use shared file storage. Data patterns of big data are difficult to handle with traditional shared file storage due to unstructured logs and billions of files to be processed. In addition, NAS storage has a high investment cost per unit capacity. In this regard, migration to cost-effective Object Storage is an inevitable trend.

SDS Cloud enables migration of data stored in NAS storage in an on-premises data center to **Object Storage** as well as a **VPN** service for secure data transfer.

Architecture Diagram

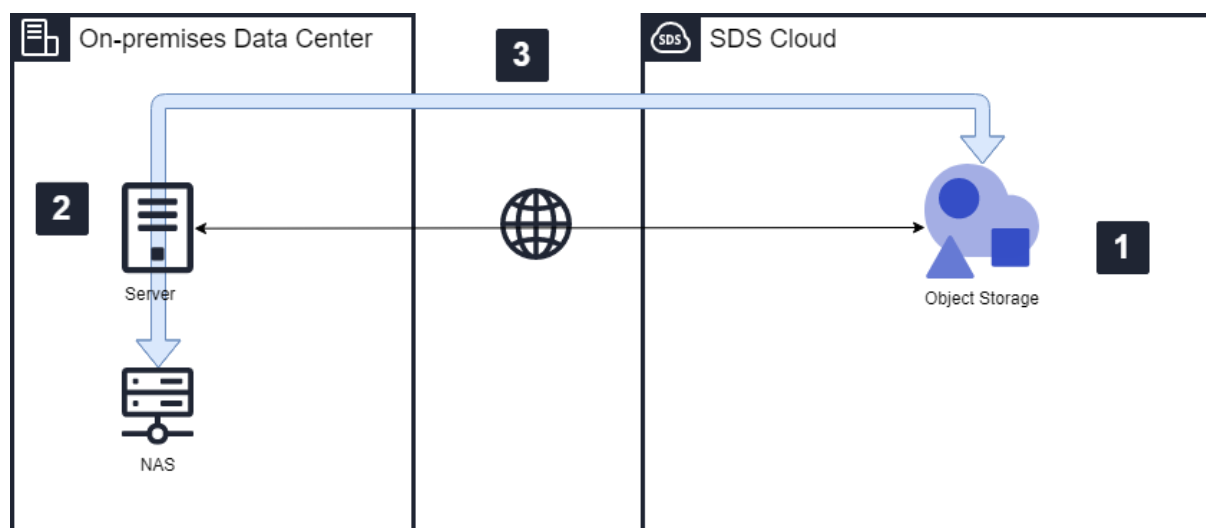


Figure 1. Migration from on-premises NAS to object storage

1. Create a bucket by applying for **Object Storage** service.
2. The user installs a migration tool on the server where NAS storage is mounted, and sets the **Object Storage**-related information on the target system. The transport protocol is Amazon S3 REST API and data encryption and transport layer encryption (SSL) options can be used to further increase confidentiality.

3. Transfer data to **Object Storage** using the migration tool.

Use Cases

- A. NAS storage performance degradation due to increased metadata

A company with more than 10,000 employees would consider a central document management system for storage. For conventional NAS storage, the increase in metadata causes a decrease in storage performance. In addition, as the capacity increases, investment costs also inevitably increase.

Object Storage can dramatically reduce the total storage investment by migrating the existing NAS storage data to low-cost storage. **Object Storage** is a pay-as-you-go model and can be easily expanded.

- B. 2nd tier storage in High Performance Computing(HPC)

HPC traditionally requires a low latency parallel distributed file system. Depending on the type of workload, data with infrequent storage access or higher latency processing, overall storage TCO can be saved through automatic archiving (or tiering) from expensive NAS into **Object Storage**.

Pre-requisites

Applying for **Object Storage** is mandatory.

Manual installation of a migration tool is required on the server accessing the NAS storage.

Limitations

Live migration is not available if multiple clients are making I/O to the NAS storage at the same time.

Considerations

When performing data migration through the service network, it is necessary to minimize the service impact by scheduling the migration for when the traffic usage is

low or by limiting the bandwidth of the traffic.

Related Products

- Object Storage

Related Documents

- Migration tool - [Infinistor ifsmover](#)