

# Data backup with Object Storage

## Overview

Backup is essential for stable operation of the system.

SDS Cloud backs up various products using low-cost **Object Storage**. Using the service, you can easily back up the OS images of **Virtual Server**, Database or your folders/files.

In addition, unlike traditional tape-based backup methods, **Object Storage** provides an immediate access to data with cost-effectiveness and reliability at the same time.

## Architecture Diagram

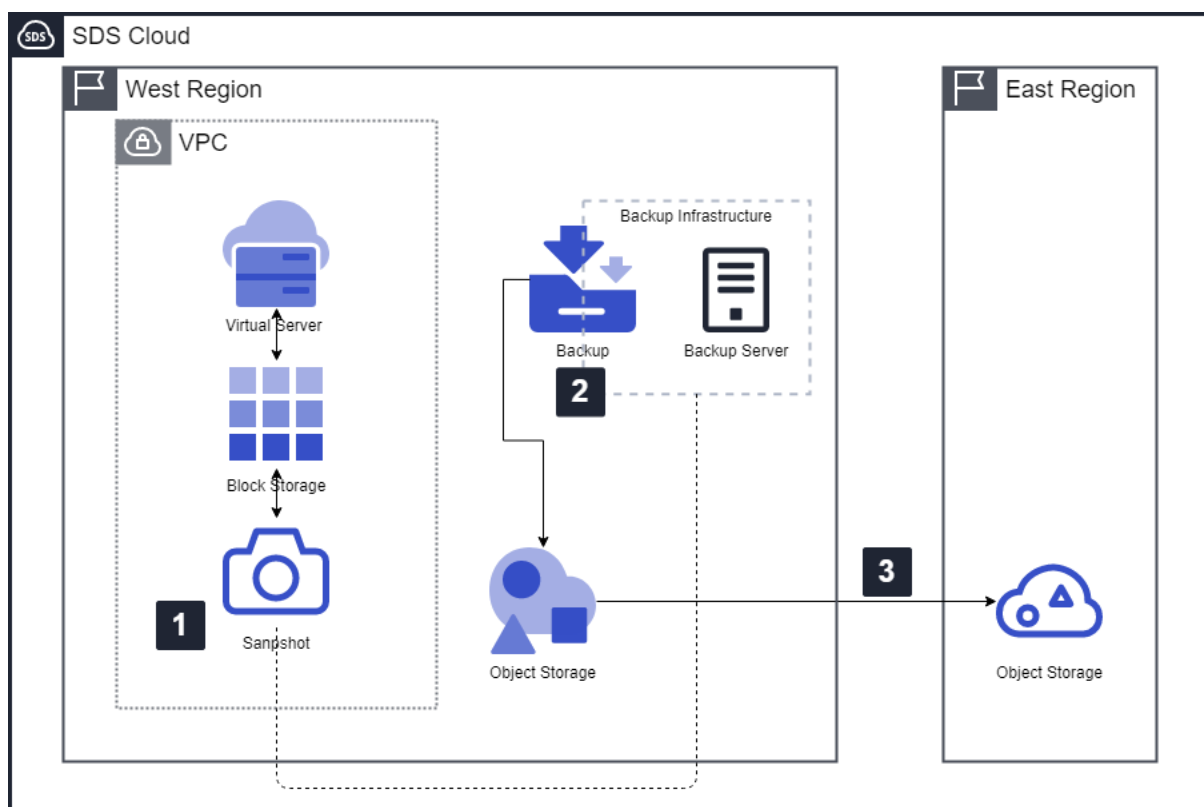


Figure 1. Backing up Virtual Server's OS using Object Storage

1. Enter necessary information such as backup target, backup storage, and storage period for creating a backup policy, and select schedule backup as the method.

2. The created snapshot is saved in **Object Storage** through the master server.
3. Duplicate the snapshot to Object Storage in another region.

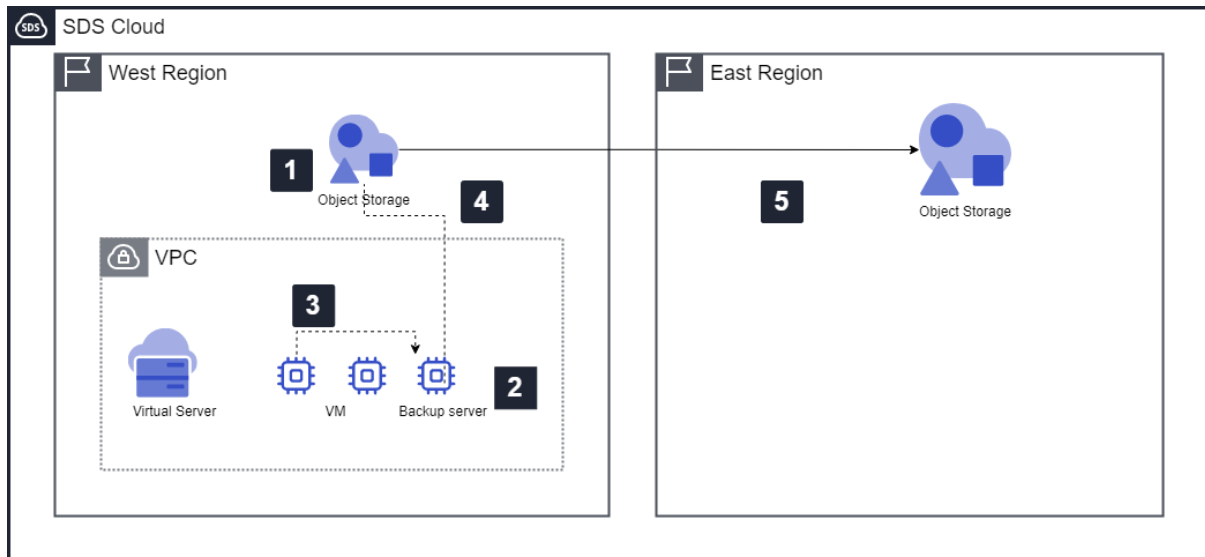


Figure 2. Backup user data using Object Storage

1. Create a backup bucket through Object Storage and issue a connection URL, access key, and secret key.
2. Install a backup server in the Virtual Server and register the backup bucket as a backup disk pool.
3. Set up a backup policy and perform agent-based network backup.
4. Duplicate the snapshots to Object Storage in another region.

## Use Cases

### A. Backing up Virtual Server's OS

OS Snapshots can be backed up for mission-critical applications.

Store the backup snapshots in low-cost storage and easily restore them when needed.

**Object Storage** replication between regions is also provided to restore the workload in another data center in the case of a disaster situation.

### B. Database backup

Database data and change logs are backed up and stored in **Object Storage**.

You can restore database data and environments based on the backup history and information using **DB Service**.

### C. User data backup

Back up the directories and files on the Virtual Server or Bare Metal Server and store them in the Object Storage. You can set up a policy through backup S/W and perform automatic backup. In addition, you can easily restore data using backup history. Replication of Object Storage between regions also supports secure storage of backup data and restoration even in a disaster situation.

## Pre-requisites

Application for **Backup, Virtual Server** and **Object Storage** is required.

## Limitations

OS image backup is provided for **Virtual Server** only. **Bare Metal Server**, data backup and on-demand backup methods will be available later. OS image backups are not displayed on Object Storage usage status.

Replication of Object Storage from other regions is not provided as a self-service and you must apply for the product through a separate service request.

User data (directory and file) backup must be done directly by the user on a Bring Your Own License (BYOL) basis to perform backup/vault replication. In addition, the user must manually configure security settings such as the Virtual Server's Security Group, VPC firewalls, and IP Address ACL for Object Storage Bucket.

## Considerations

For OS images, full backup data is not snapshot files (Delta data) but the actual virtual disk before the snapshot request. In the case of storing multiple backup copies, the increase in storage capacity and storage cost need to be taken into consideration.

In addition, due to the increase in delta data after taking snapshots, deleting a snapshot to secure the storage capacity may be necessary.

## Related Products

- Virtual Server
- Bare Metal Server
- Block Storage
- Object Storage
- Backup
- DB Service