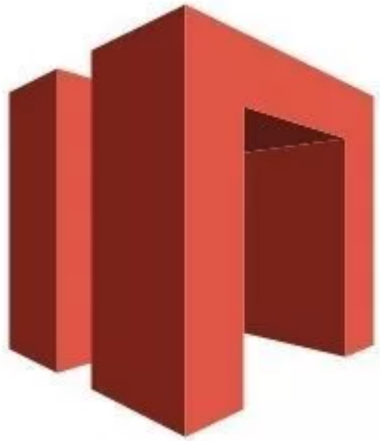


AWS Storage Gateway

Storage Gateway

- AWS Storage Gateway is a service that connects an on-premises software appliance with Cloud bases storage to provide seamless and secure integration between and organizations on-premises IT environment and AWS storage infrastructure.

- The service enables you to securely store data to the AWS cloud for scalable and cost effective storage.

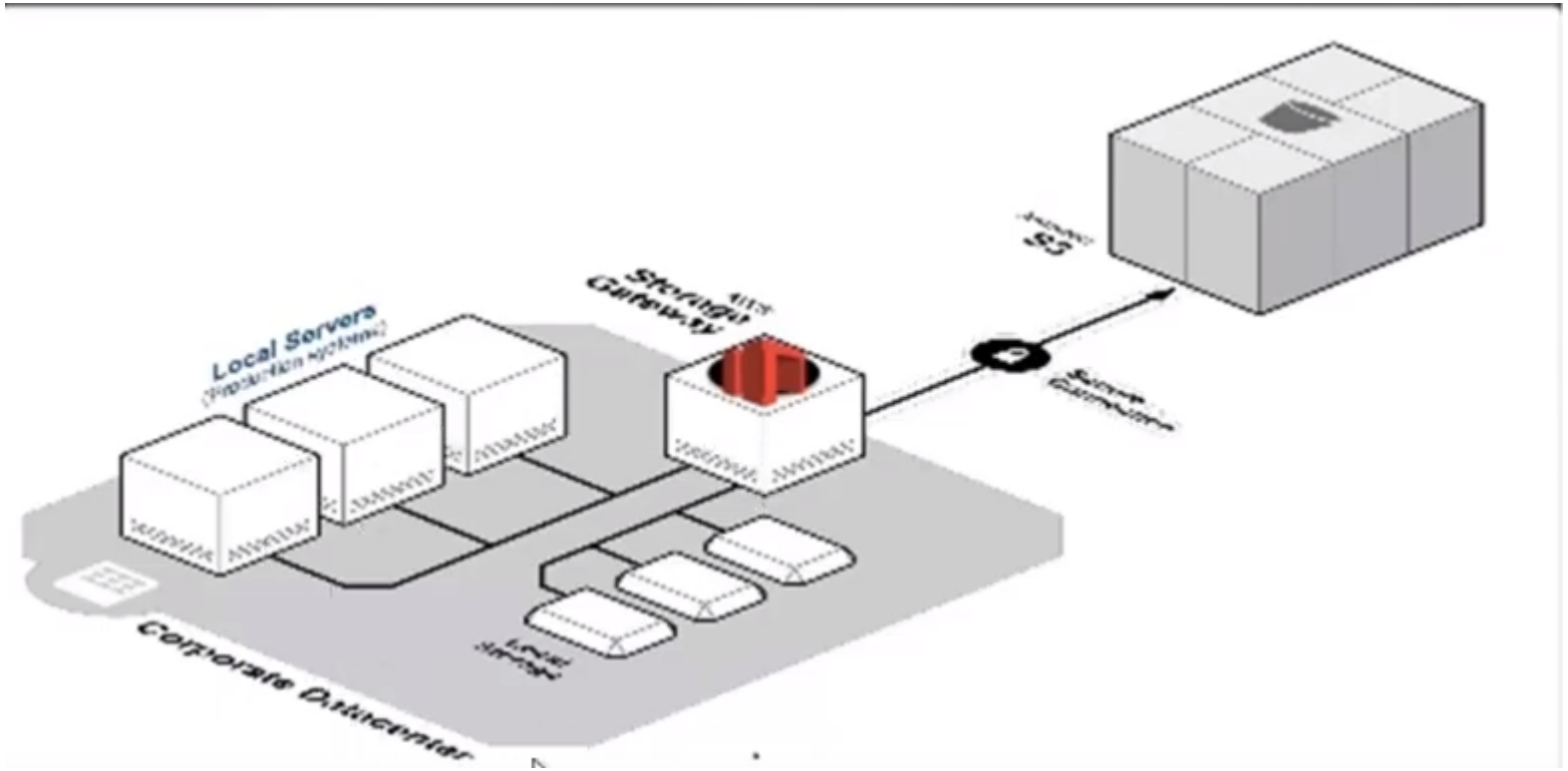
Storage Gateway

- The AWS Storage Gateway service enables hybrid storage between on-premises environments and the AWS Cloud.

- It seamlessly integrates on-premises enterprise applications and workflows with Amazon’s **block** and **object** cloud storage services through industry standard storage protocols.

- It provides low latency performance by caching frequently accessed data on premises while storing data securely and durably in Amazon Cloud storage services.

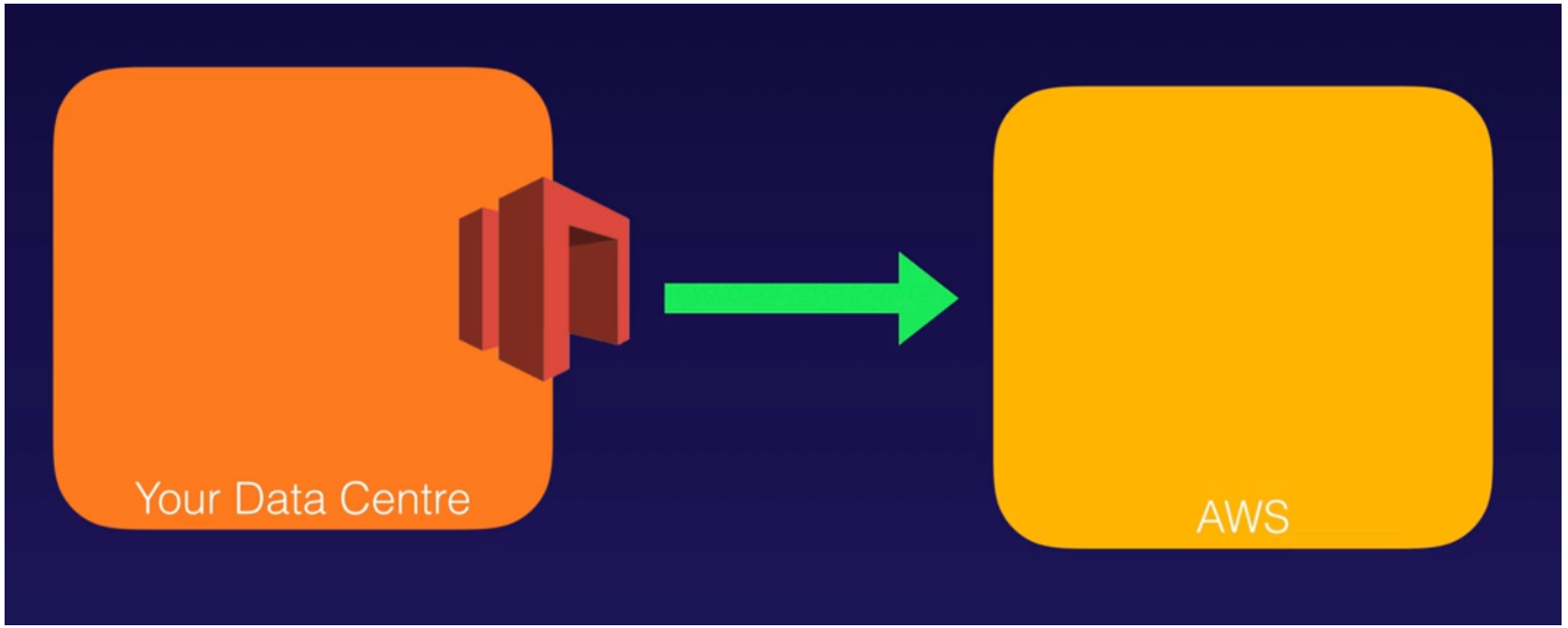
Storage Gateway



What is Storage Gateway ?

- AWS Storage Gateway’s software appliance is available for download as a virtual machine image that you can install on a host in your datacenter.
- Storage Gateway supports either VMware ESXi or Microsoft Hyper-V.
- Once you have installed your gateway and associated it with your AWS account through the activation process , you can use the AWS management console to create the storage gateway option that is right for you.

Storage Gateway



Storage Interfaces

AWS Storage Gateway supports three storage interfaces:

- File Gateway
- Volume Gateway
  - Cached volumes
  - Stored Volumes
- Tape Gateway

Storage Interfaces

File Gateway

- The File gateway enables you to store and retrieve objects in Amazon S3 using file protocols, such as NFS.

Volume Gateway

- The Volume gateway provides block storage to your applications as local iSCSI disk volumes that can be tiered into Amazon S3.
  - **cached mode,** your primary data is written to S3, while you retain some portion of it locally in a cache for frequently accessed data.
  - **stored mode,** your primary data is stored locally and your entire dataset is available for low latency access while asynchronously backed up to AWS

Tape Gateway

- The tape gateway provides your backup application with an iSCSI virtual tape library(VTL) interface, consisting of a virtual media changer, virtual tape drives and virtual tapes. Virtual tape data is stored in S3 or to Glacier

Storage Interfaces

File Gateway

- Stores files as objects in Amazon S3, with a local cache for low latency access to your most recently used data.

Volume Gateway

- Block storage in Amazon S3 with point-in-time backups as Amazon EBS snapshots.
  - **Cache Volumes**: Low latency access to your most recently used data.
  - **Stored Volumes**: On-premises data with scheduled offsite backups

Tape Gateway

- Backup your data to Amazon S3 and archive in Amazon Glacier using your existing tape-based processes.

Storage Interfaces

Volume Gateway

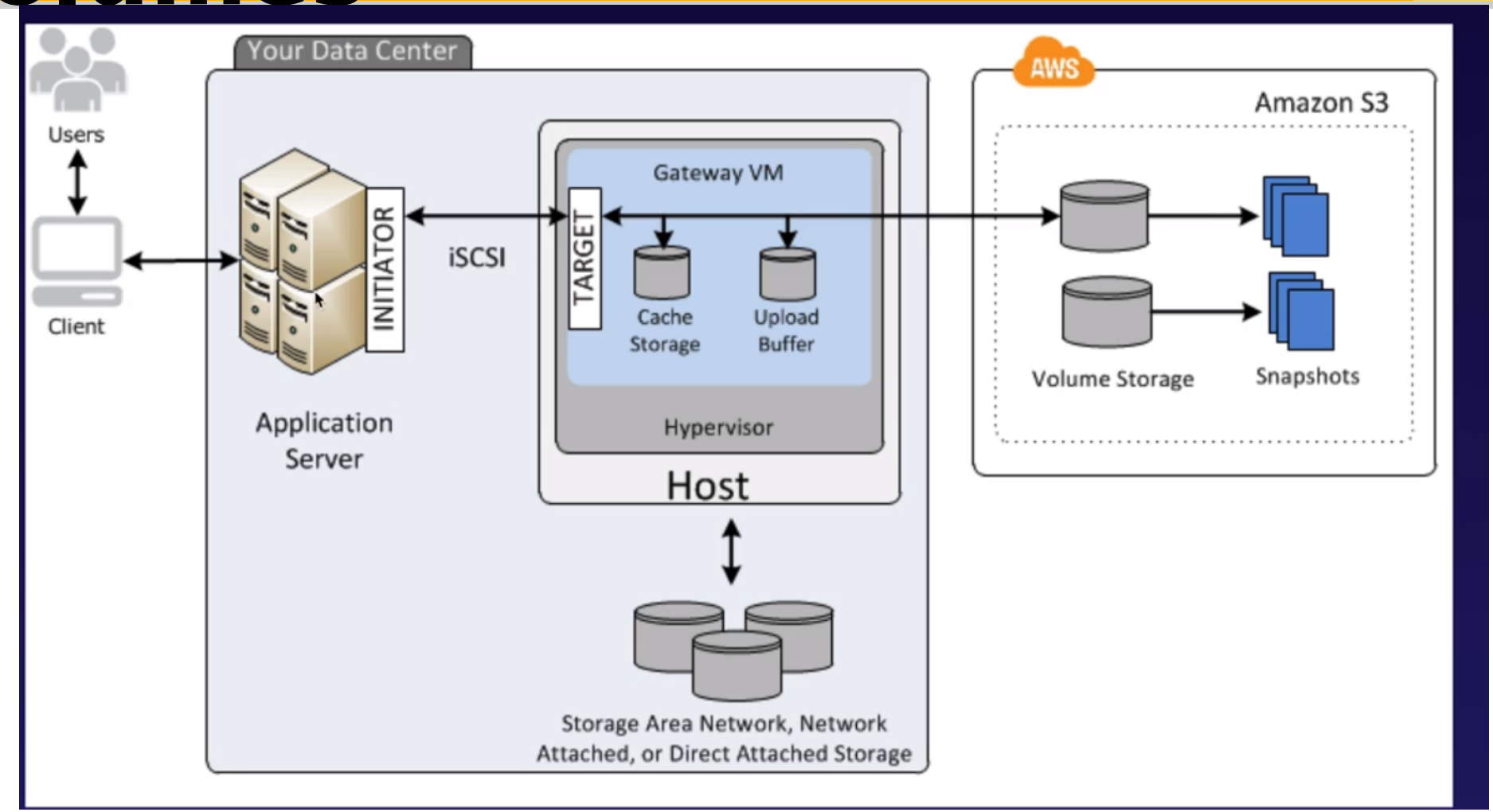
- The Volume interface presents your applications with disk volumes using the iSCSI block protocol.
- Data written to these volumes can be asynchronously backed up as point-in-time snapshots of your volumes, and stored in the cloud as Amazon EBS snapshots.
- Snapshots are incremental backups that capture only changed blocks. All snapshot storage is also compressed to minimize your storage charges.

Volume gateway- Cached volumes

Volume Gateway –Cached volumes

- Cached volumes let you use Amazon Simple Storage Service(S3) as your primary data storage while retaining frequently accessed data locally in your storage gateway.
- Cached volumes minimize the need to scale your on-premises storage infrastructure, while still providing your applications with low-latency access to their frequently accessed data.
- You can create storage volumes up to 32TB in size and attach to them as iSCSI devices from your on-premises application servers.
- Your gateway stores data that you write to these volumes in S3 and retains recently read data in your on-premises storage gateway’s cache and upload buffer storage. 1 GB – 32 TB in size for cached volumes.

Volume gateway- Cached volumes

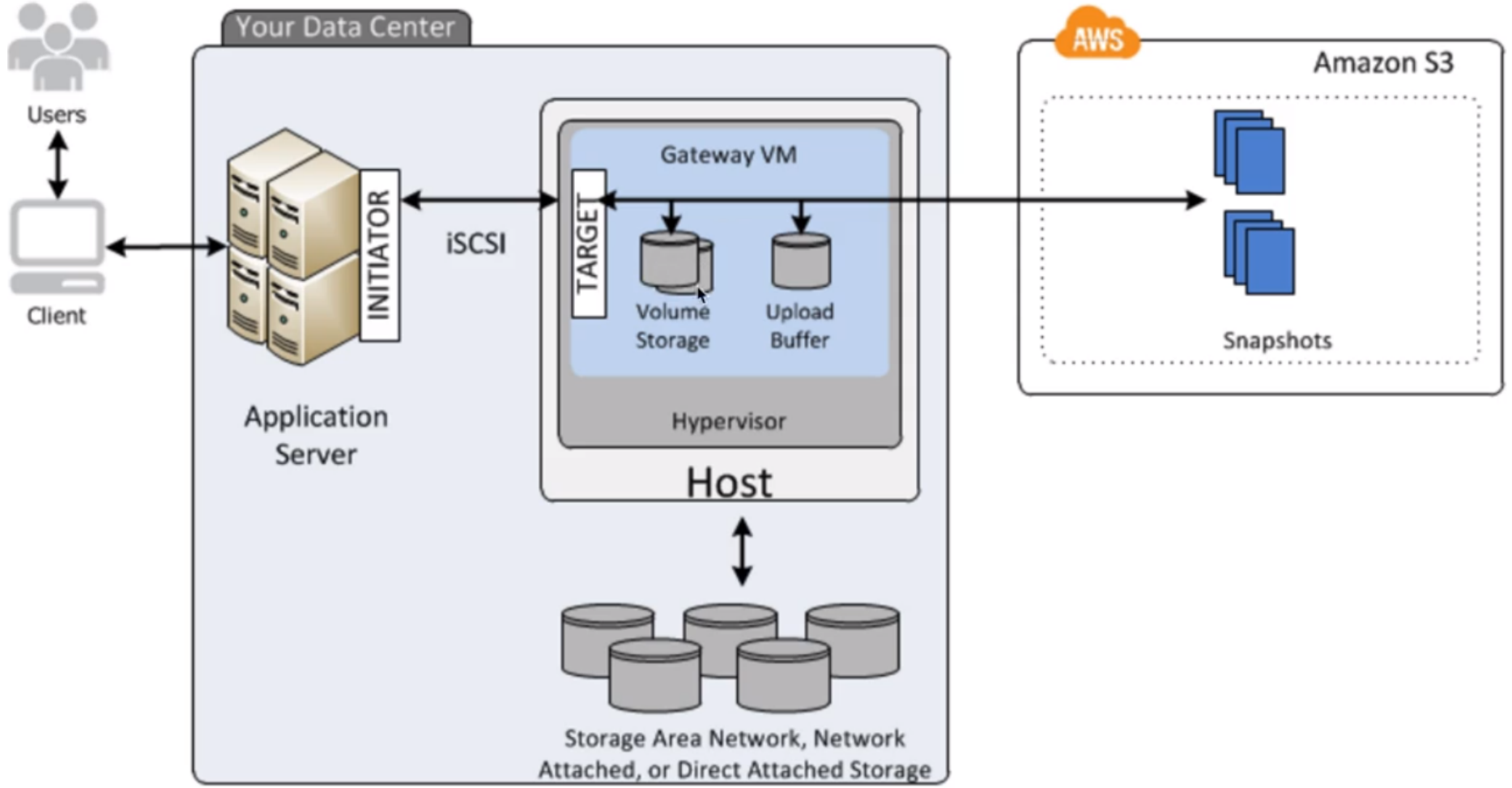


Volume gateway- Stored volumes

Volume Gateway – stored volumes.

- Stored volumes let you store your primary data locally, while asynchronously backing up data to AWS. Stored volumes provide your on-premises applications with low latency access to their entire datasets, while providing durable , off-sites backups.
- You can create storage volumes and mount them as iSCSI devices from your on-premises application servers.
- Data written to your stored volumes is stored on your on-premises storage hardware.
- This data is asynchronously backed up to S3 in the form of Elastic block store (EBS) snapshots
- 1GB – 16 TB in size of stored volumes.

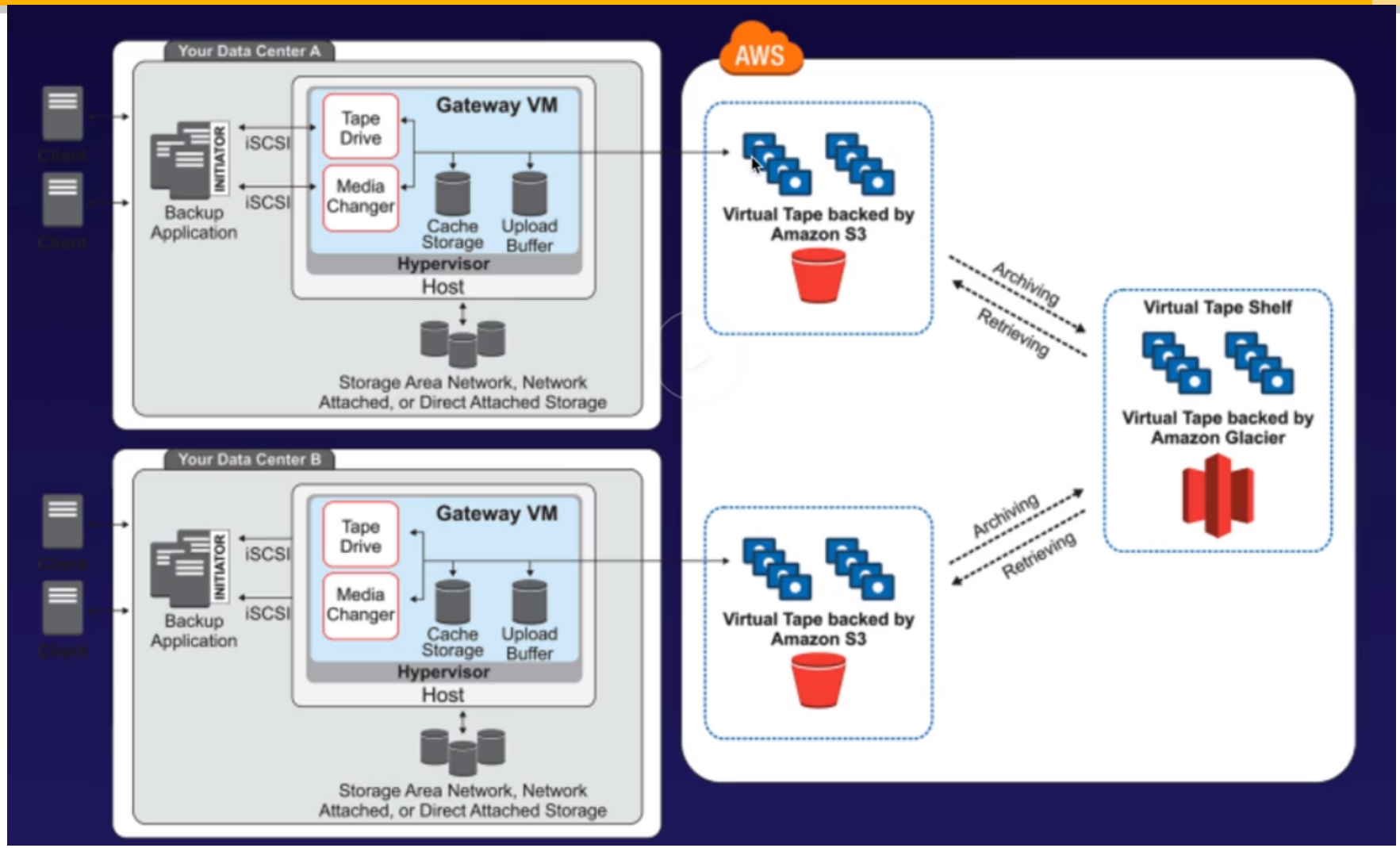
Volume gateway- Stored volumes



Tape Gateway

- Tape gateway offers a durable, cost effective solution to archive your data in AWS Cloud. The VTL interface provides you to leverage your existing tape based backup application infrastructure to store data on virtual tapes that you create on your tape gateway.
- Each tape gateway is preconfigured with a media changer and tape drives which are available to your existing client backup applications as iSCSI devices.
- You add tapes as you need to archive your data. Supported by NetBackup, Backup Exec, Veeam etc

Tape Gateway



Exam Tips

File Gateway

- File Gateway: For flat files, stored directly to S3.

Volume Gateway

- Block storage in Amazon S3 with point-in-time backups as Amazon EBS snapshots.
  - **Cache Volumes**: Entire dataset is stored on S3 and most frequently used data is cached on site.
  - **Stored Volumes**: Entire dataset is stored on site and is asynchronously backed up to S3.

Tape Gateway

- Backup your data to Amazon S3 and archive in Amazon Glacier using your existing tape-based processes.