Storage Gateway

What is AWS Storage Gateway

❑ AWS Storage Gateway connects an on-premises appliance with cloud-based storage.

❑ AWS Storage Gateway is a hybrid storage service that enables your on-premises applications to seamlessly use AWS cloud storage.

❑ The gateway connects to AWS storage services, such as Amazon S3, Amazon Glacier and Amazon EBS.

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

❑ It provides an optimized data transfer mechanism and bandwidth management, which tolerates unreliable networks and minimizes the amount of data being transferred.

❑ AWS Storage Gateway supports three storage interfaces: file, volume, and tape.
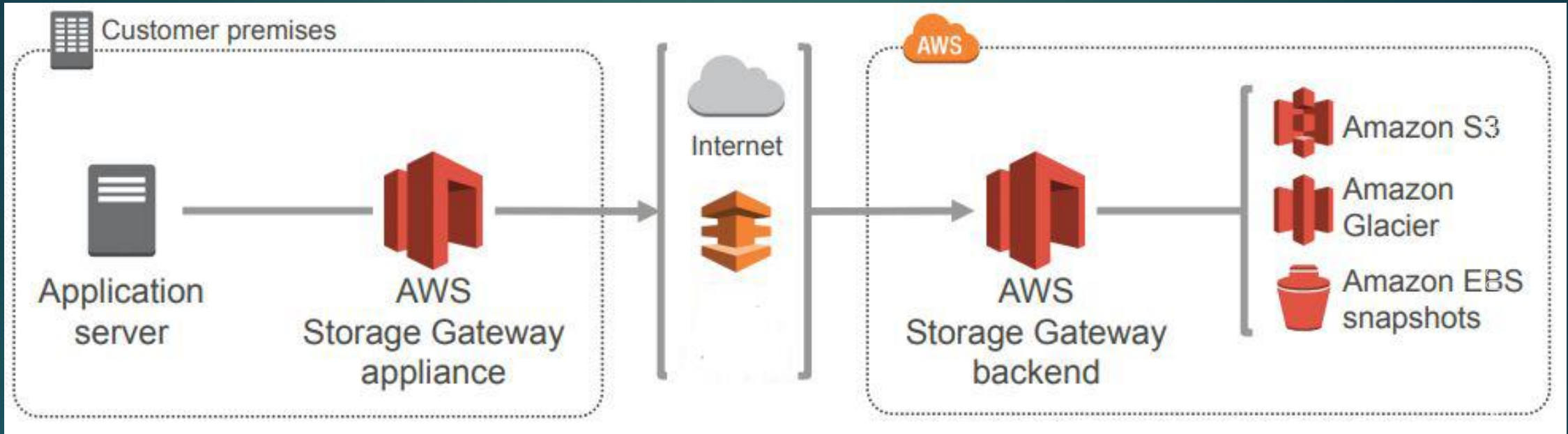
AWS Storage Gateway: Use Cases

Backup

Archiving

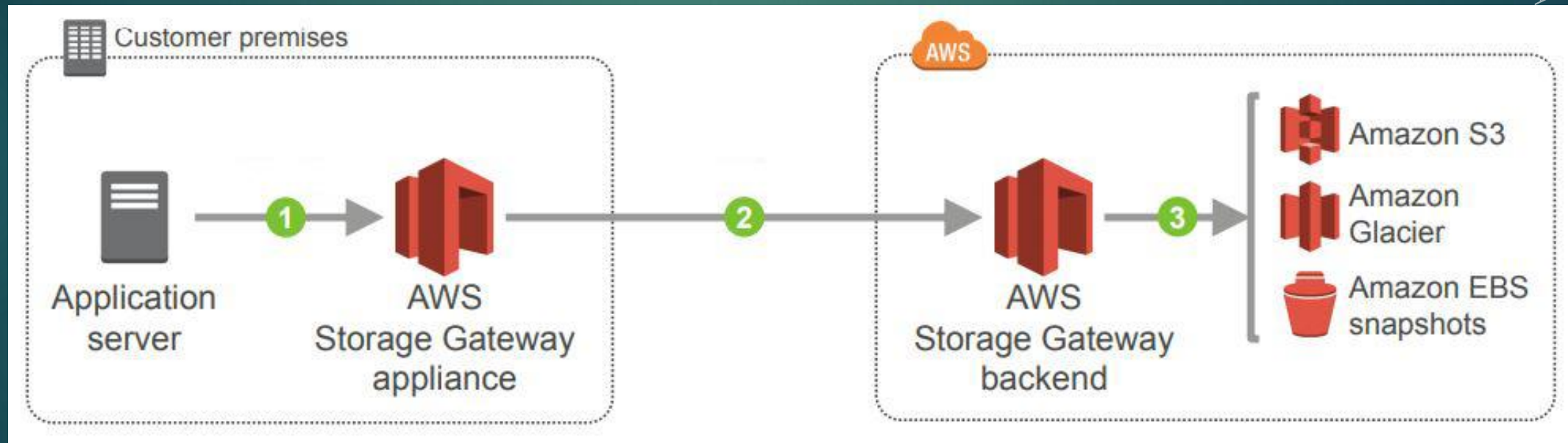Disaster Recovery

Migration

AWS Storage Gateway: How it Works

AWS Storage Gateway: Writes Data

1. Application writes data to AWS Storage Gateway.
2. AWS Storage Gateway stores locally, and asynchronously compresses and securely uploads the changed data.
3. Backend takes compressed data and stores in Amazon S3, Amazon Glacier, or Amazon EBS, with AES- 256 encryption.
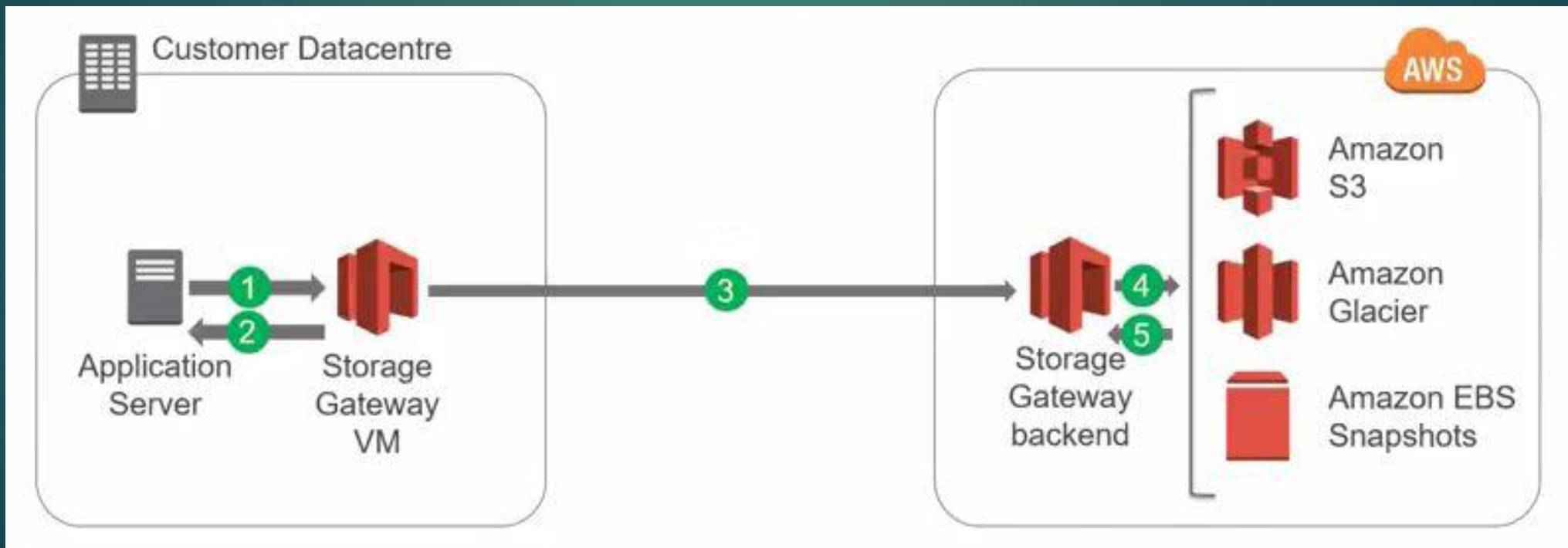
AWS Storage Gateway: Read Data

1. Application reads data from AWS Storage Gateway.
2. AWS Storage Gateway returns requested data from local storage.
3. Data not in local storage is requested from backend.
4. Backend fetches compressed data from Amazon S3, Amazon Glacier, or Amazon EBS.
5. AWS Storage Gateway receives data from backend, decompresses, stores locally, and responds to the application.

AWS Storage Gateway: Solutions
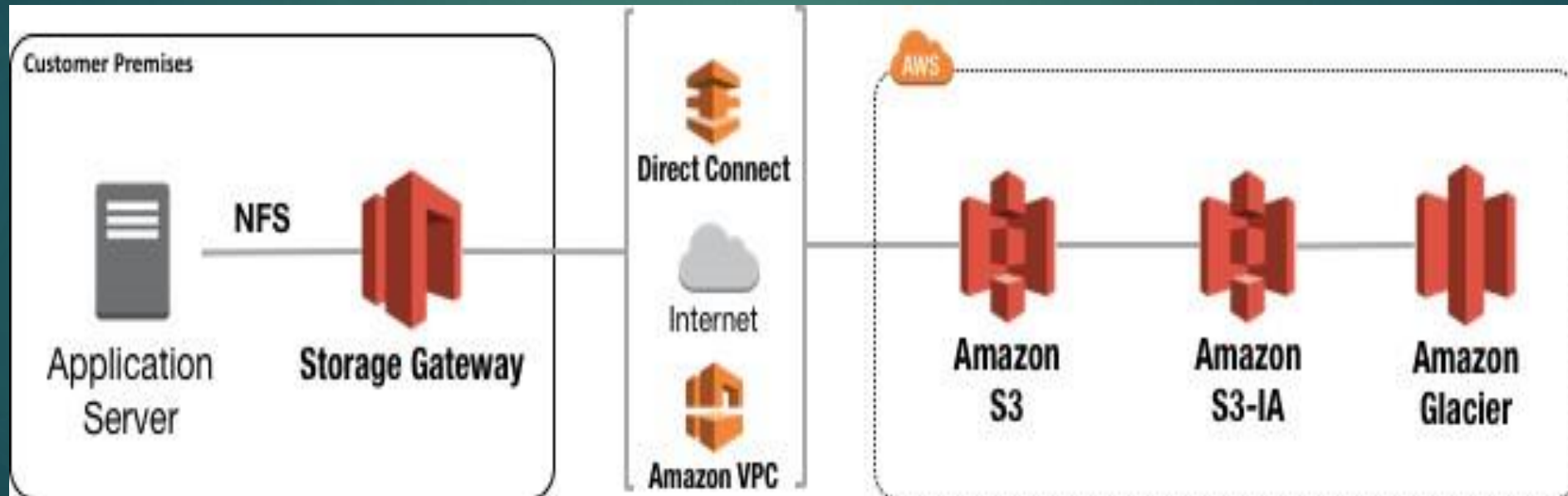
File Gateway

Volume Gateway

Cached Volume

Stored Volume

Tape Gateway

AWS Storage Gateway: File Gateway

❑ File gateway provides a virtual file server, which enables you to store and retrieve Amazon S3 objects.

❑ With file gateway, your configured S3 buckets will be available as mount points.

❑ Your most recently used data is cached on the gateway for low-latency access.

AWS Storage Gateway: Cached Volume

❑ Cached volumes let you use Amazon S3 as your primary data storage while retaining frequently accessed data locally in your storage gateway.

❑ Your gateway stores data that you write to these volumes in Amazon S3 and retains recently read data in your on-premises storage gateway's cache.
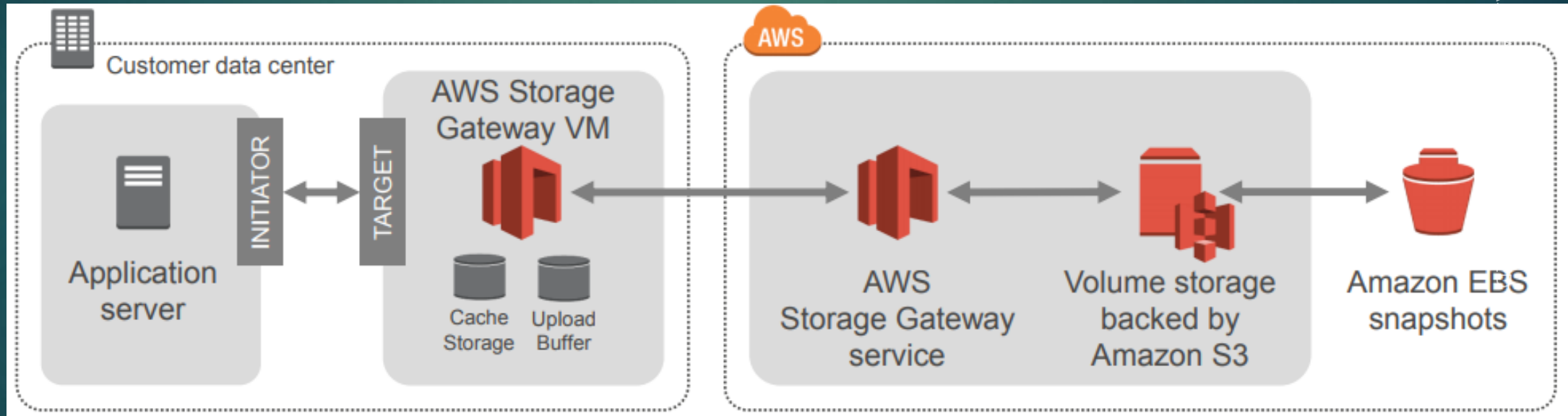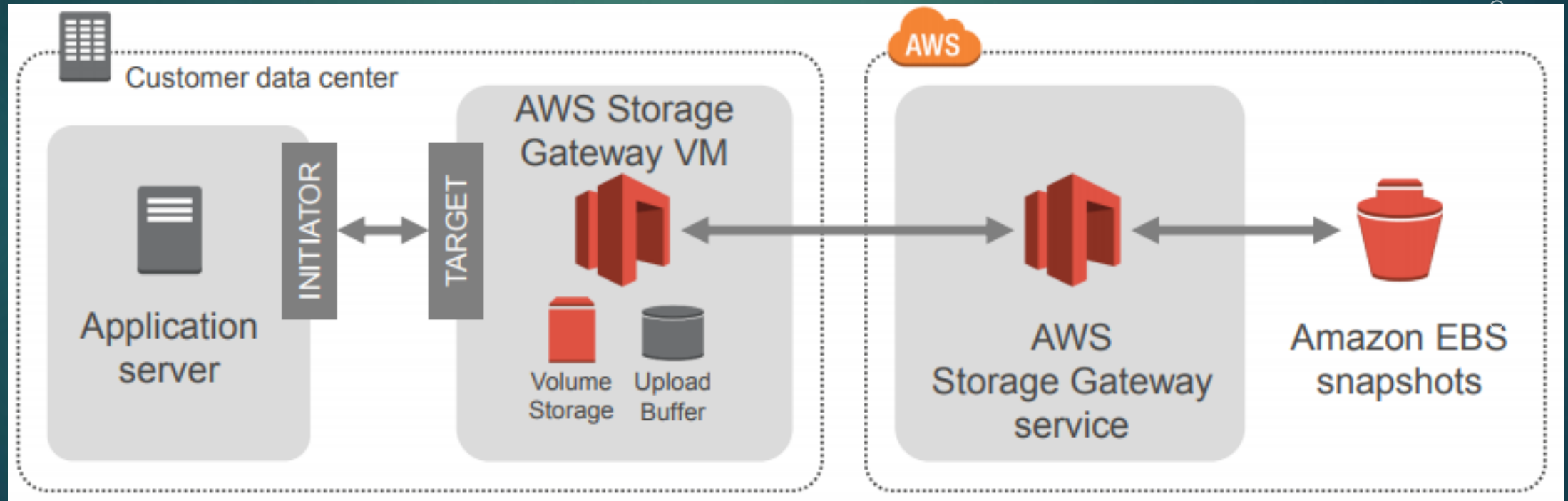
AWS Storage Gateway: Stored Volume

❑ Stored volumes let you store your primary data locally, while asynchronously backing up that data to AWS.

❑ Stored volumes provide your on-premises applications with low-latency access to their entire datasets, while providing durable, off-site backups.

AWS Storage Gateway: Tape Gateway

❑ Tape Gateway offers a durable, cost-effective solution to archive your data in the AWS Cloud,

❑ Virtual tapes stored in AWS.