AWS Storage Gateway Cheat Sheet

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General Characteristics

3 types of gateways available(NFS or iSCSI):

- File Gateway
- Volume Gateway
- Tape Gateway

You install the Gateways with a provided image on a on-premises server VM. Also possible on an instance.

VM software is either Vmware ESXi or Microsoft Hyper-V.

Objects on S3 are encrypted using S3 SSE-S3 (S3 managed encryption keys).

Data also encrypted on Glacier.

Data transfer from Gateway to S3 and Glacier uses SSL.

Gateway Minimum Hardware Requirements

4 virtual processors assigned to the VM

16 GB of RAM assigned to the VM

80 GB of disk space for installation of VM image and system data

If an installation on an instance then use a xlarge type minimum.

Updates and patches automatically deployed during weekly maintenance schedule. Short downtime.

Pricing of Storage Gateway

Storage on S3 (file & volume)

Snapshot storage in EBS

Virtual Tape storage (inlcuding archived)

Data written to AWS storage by the Gateway

Virtual Tape retrieval

Data transfer OUT from AWS Storage Gateway service to EC2 hosted Gateway and on-premises Gateway

File Gateway

The protocol to access the File Gateway is NFS 3 or 4.1.

Files are stored as objects on S3.

Local cache for recently accessed data.

On S3, lifecycle policies, cross-region replication and versioning are available features.

Asynchronously updates the objects on S3.

Max 1 file share per S3 bucket, max 10 file shares per Gateway and max size of a file is 5TB.

Optimized data transfer:

- Uses multipart uploads and copy put, so only changed data is uploaded to S3.
- Uses byte-range downloads.

Volume Gateway

Mount volumes as iSCSI devices.

Asynchronous incremental backups done via snapshots that are stored as EBS snapshots.

Can restore snapshots less than 16TB to EC2 instances.

Max 32 volumes per Gateway.

When considering local storage size, need to take into account size of file store and upload buffer.

Cached Volumes:

- Store data on S3
- Cache frequently accessed data locally
- Max volume size 32TB, max storage 1PB
- Allocate minimum 20% of file store size to local cache storage (hard drives)
- Data not available via S3

Stored Volumes:

- Data stored locally (on Gateway)
- Asynchronous backup via snapshots to S3
- Max volume size 16TB, max storage 512TB
- Map storage volumes to on-premises DAS or SAN using iSCSI

Tape Gateway (VTL Virtural Tape Library)

Backup to S3 and archieval solution to Glacier.

Requires a client backup software.

Available as iSCSI devices.

A tape is write protected, it is read-only.

Retrieval from tape takes 3 to 5 hours.

Tape size from 100GB to 2.5TB, max 1500 tapes or max 1PB per VTL.

Virtual Tape Shelf can store unlimited amount of data on Glacier.

Asynchronous backups.

Supported Backup Applications:

- Arcserve Backup
- Commvault
- DellNetvault Backup
- EMC Networker
- HPE Data Protector
- Microsoft System Center Data Protection Manager
- Veeam Backup & Replication
- Veritas Backup Exec