

# **STORAGE GATEWAY**

AWS Storage Gateway is a hybrid cloud storage service that connects on-premises environments with cloud storage, seamlessly integrating your existing applications and workflows with AWS cloud services. Here are the key components and functionalities of AWS Storage Gateway:

## ***Key Components:***

### **1. Gateway Types:**

- **File Gateway:** Presents a file interface to applications, stored as objects in Amazon S3 or Amazon S3 Glacier. It supports Network File System (NFS) and Server Message Block (SMB) protocols.
- **Volume Gateway:**
  - **Stored Volumes:** Presents block storage volumes as iSCSI devices that are backed by Amazon S3. Data is stored locally and asynchronously backed up to S3.
  - **Cached Volumes:** Uses S3 as the primary data storage while retaining frequently accessed data locally. Only data that is infrequently accessed is stored in S3.
  - **Tape Gateway:** Presents a virtual tape library (VTL) interface using Amazon S3 Glacier and Glacier Deep Archive for backup and archival storage.

### **2. Integration:**

- **AWS Management Console:** Manages and monitors Storage Gateway resources.
- **AWS CLI/SDKs:** Allows programmatic access to manage Storage Gateway resources.
- **CloudWatch:** Provides monitoring and logging capabilities for your gateways.

### **3. Deployment:**

- **On-Premises:** Deployed as a virtual machine (VM) or hardware appliance within your data center.
- **AWS Cloud:** Can be used to extend on-premises applications to AWS cloud services.

#### 4. Use Cases:

- **Hybrid Cloud:** Integrates on-premises environments with AWS cloud storage.
- **Backup and Archive:** Provides scalable and cost-effective backup and archive solutions using AWS S3 and Glacier.
- **Disaster Recovery:** Enables disaster recovery by replicating on-premises data to AWS.
- **Migration:** Facilitates cloud migration by seamlessly connecting existing applications to AWS cloud storage.

#### Benefits:

- **Seamless Integration:** Allows applications to seamlessly use AWS storage services without needing to modify existing applications.
- **Scalable and Cost-Effective:** Scales with your storage needs and leverages the cost-effectiveness of AWS cloud storage services like S3 and Glacier.
- **Data Security and Durability:** Ensures data security and durability by leveraging AWS' robust infrastructure and security features.

AWS Storage Gateway simplifies the process of extending your on-premises storage into the cloud while maintaining low-latency access to data and integrating with your existing infrastructure and applications.