AWS DataSync vs Storage Gateway

AWS DataSync is a service provided by Amazon Web Services (AWS) that simplifies, accelerates, and automates the process of transferring data between on-premises storage systems and AWS services.

After the initial migration, AWS DataSync can be configured to maintain the consistency of data between on-premises storage and AWS storage services. In such cases, data synchronization between the two happens in either real or near real-time.

While both AWS DataSync and AWS Storage Gateway provide solutions for integrating on-premises storage environments with AWS cloud storage services, they serve different purposes and have distinct functionalities, including how they handle data synchronization. This is illustrated in the bulleted sub-sections below:

AWS DataSync

- **Purpose**: Primarily designed for high-speed, one-time data transfers and ongoing data synchronization between on-premises storage systems and AWS storage services.

- **Data Transfer Mechanism**: Utilizes optimized data transfer protocols to ensure fast and efficient transfer of large volumes of data.

- **Use Cases**: Ideal for scenarios requiring frequent updates or synchronization of data between on-premises and AWS environments, such as continuous data backup, real-time data processing, or maintaining consistent copies of data for disaster recovery purposes.

AWS Storage Gateway

- **Purpose**: Offers a hybrid storage solution that enables on-premises applications to seamlessly access data stored in AWS cloud storage services with lower latency than it otherwise could.

- **Data Synchronization**: While AWS Storage Gateway supports data migration and synchronization capabilities, its primary focus is on providing on-demand access to data stored in AWS, rather than continuous synchronization.

- **Storage Protocols**: Supports various storage protocols, including NFS, SMB, and iSCSI, allowing existing on-premises applications to interact with AWS storage as if it were local storage.

- **Use Cases**: Commonly used for extending on-premises storage capacities, disaster recovery, data archiving, and enabling cloud-based applications to access on-premises data.

TL;DR

AWS Data Sync: Used for data migration and synchronization.

AWS Storage Gateways: Used for low-latency access to data and adding capacity to existing on-prem storage.