



TNGS Learning Solutions

AWS Solutions Architect

Online Course

AWS S3 Glacier

AWS S3 Glacier

- AWS S3 Glacier is a cloud-based data archival and cold storage service provided by Amazon Web Services (AWS).
- It is designed for long-term data retention and archiving, where data is stored at a very low cost, and access times can be longer compared to standard Amazon S3 storage classes.
- S3 Glacier offers several benefits for organizations looking to archive data securely and cost-effectively

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- **Cost-Effective Storage:** S3 Glacier is one of the most cost-effective storage solutions offered by AWS. It provides low storage costs for long-term data retention, making it suitable for data that is rarely accessed but needs to be preserved for compliance, legal, or business reasons.
- **Data Durability:** Data stored in S3 Glacier is highly durable, with 99.999999999% (11 nines) durability over a given year. This ensures that your archived data remains intact and secure.

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- **Security and Compliance:** S3 Glacier offers robust security features, including server-side encryption, access controls, and data integrity checks. It is compliant with various industry standards and regulations, making it suitable for storing sensitive or regulated data.
- **Flexible Retrieval Options:** While S3 Glacier is designed for long-term storage, it offers flexible retrieval options. You can choose from three retrieval options, including Expedited, Standard, and Bulk, depending on your data access requirements.
 - Expedited Retrieval: Data is typically available in 1-5 minutes.
 - Standard Retrieval: Data is typically available in 3-5 hours.
 - Bulk Retrieval: Data is typically available in 5-12 hours and is the most cost-effective option.

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- **Data Lifecycle Policies:** You can define data lifecycle policies to automatically transition data from standard S3 storage classes (such as S3 Standard or S3 Intelligent-Tiering) to S3 Glacier based on predefined criteria. This helps optimize storage costs over time.
- **Integration with Other AWS Services:** S3 Glacier integrates seamlessly with other AWS services, allowing you to automate data archival and retrieval processes. For example, you can use Amazon S3 Lifecycle policies, AWS DataSync, or AWS Storage Gateway to manage data transitions to Glacier.

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- **Inventory and Monitoring:** S3 Glacier provides tools for inventorying and monitoring archived data. You can generate inventory reports and set up event notifications to track changes to your archives.
- **Data Locking:** S3 Glacier supports data locking, which allows you to enforce retention policies and ensure data immutability for compliance purposes.

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- **Restore Capacity:** S3 Glacier provides configurable restore capacity, which allows you to control the number of concurrent retrieval requests, helping you manage retrieval costs.
- **Vaults and Archives:** In S3 Glacier, data is organized into vaults, and each vault can contain multiple archives. Vaults serve as logical containers for organizing and managing your archived data.

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- Amazon S3 Glacier is commonly used for archival storage of backup data, historical records, regulatory compliance data, and other information that needs to be retained for extended periods.
- Its low-cost, durable, and secure storage options make it a valuable tool for organizations seeking to meet data retention requirements while optimizing storage costs.