Amazon S3 for Financial Services
Storage built for innovation

Financial Services institutions are collecting and storing massive amounts of data.

Financial Services Institutions (FSIs) are collecting large volumes of data from sources such as customer financial records, transaction data, and customer service engagements such as chatlog transcriptions. However, issues such as capacity planning and allocation, legacy infrastructure, and siloed data storage are preventing organizations from realizing the full value of their data.

Amazon Simple Storage Service (Amazon S3) delivers highly reliable, secure, durable, and scalable object storage that enables companies to collect and store massive amounts of unstructured data. Amazon S3 data lakes also serve as the foundation for FSIs to perform advanced analytics and use their data to train AI/ML models.

Why FSIs, from startups to enterprises, are using Amazon S3 to store and protect data.

Security and compliance

Amazon S3 provides comprehensive security and compliance capabilities that meet even the most stringent regulatory requirements. **Amazon S3 Object Lock** provides further data integrity and ensures regulatory compliance by preventing data from being changed or deleted according to your Write Once Read Many (WORM) retention policies and has been assessed as compliant with SEC Rule 17a-4(f), FINRA Rule 4511, and CFTC Regulation 1.31, and includes the WORM status of objects.

Access management, encryption, and key management

With Amazon S3 you can control access policies at the user and resource levels, **Block Public Access** to your S3 buckets, and further restrict access to data from your **Amazon Virtual Private Cloud instance**. Amazon S3's **encryption** and **key management** tools protect data while in transit or at rest, and you can use your own encryption keys or choose from **Amazon S3-Managed (SSE-S3)** or **AWS SMS (SSE-KMS)**.

Audit and governance

Amazon S3 offers tools to automate logging and monitoring. **Amazon S3 Inventory** provides scheduled audits on the replication and encryption status of objects for business, compliance, and regulatory needs. Amazon S3 also integrates with other AWS monitoring services.

Most durable, performant cloud storage

Amazon S3 is designed for 99.999999999% of durability and protects data against site-level failures, errors, and threats by creating and storing copies of all objects uploaded to S3 across a minimum of three Availability Zones within a single AWS Region. **Cross-Region Replication (CRR)** provides additional data resiliency without creating a separate storage class.

Management features

Amazon S3 is the only service that lets you replicate, tier, query, monitor, audit and configure access at the account, bucket, prefix, and object levels. You can also use **AWS Lambda** for tasks such as data processing and transcoding, and **Amazon S3 Batch Operations*** to execute requests across billions of objects.

*Amazon S3 Batch Operations is currently in preview

Cost-efficient storage with monitoring tools

Amazon S3 scales on-demand and only charges for what you use; moreover, S3 tools identify data access patterns and tier objects across six S3 storage classes. **S3 Intelligent-Tiering**, auto-tiers data based on access patterns and **Amazon S3 Analytics – Storage Class Analysis** allows you to decide when to transition data to a new storage class.

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Building data lakes on Amazon S3 lowers costs and accelerates time to insights.

Building a data lake on AWS enables you to integrate multiple data sources into a consistent data set that is readily available to categorize, process, and mine for insights using advanced analytics and machine learning.

Amazon Lake Formation* allows you to set up a secure data lake in days by collecting and cataloging data and moving it into your Amazon S3 data lake, while you define where your data resides and what access and security policies to apply.

Amazon S3 integrates with AWS analytics services, so you can query-in-place and pay on a per-query basis. Use Amazon Athena to query S3 data, Amazon Redshift Spectrum to analyze data stored across S3 and other sources, and Amazon S3 Select to retrieve subsets of object data and improve query performance by up to 400%.

*Amazon Lake Formation is currently in preview

Catalog & search
Access and search metadata services

AWS Glue   Amazon DynamoDB   Amazon Elasticsearch

Data ingestion
Get your data into S3 quickly and securely

Amazon Kinesis Firehose   AWS Direct Connect   AWS Snowball   AWS DataSync   AWS Storage Gateway

Processing & analytics
Predictive and prescriptive analytics

Amazon Athena   Amazon QuickSight   Amazon EMR   Amazon RedShift   Amazon Neptune

AWS customers are deriving more value from their data with Amazon S3

Capital One is using Amazon S3 to fight fraud

Capital One built a data lake on Amazon S3 and leverages machine learning capabilities to detect and prevent fraud in real-time. When suspicious activity occurs, Capital One automatically alerts customers and walks them through how to report instances of fraud.

National Australia Bank (NAB) is innovating with Amazon S3

NAB is using an Amazon S3 data lake to feed its machine learning, analytics, and marketing systems. By building its data lake on AWS, NAB is able to provide full data lineage, access the data real-time via APIs, and load the data into a wide range of AWS or external services.

Other leading financial institutions are storing their data on AWS

FINra   Guardian   Nasdaq   ICAP   asurion

Ready to take a more strategic approach to storage?

If you would like to realize the true value of your data, work with your AWS account manager to design a framework for building a customized data lake on Amazon S3 and explore AWS programs designed to facilitate data lake development.

For more information go to https://aws.amazon.com/s3 and https://aws.amazon.com/big-data/datalakes-and-analytics

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