Case Study

REDUCING STORAGE COSTS AND ENHANCING DATA ACCESSIBILITY WITH AWS S3 AND GLACIER ARCHIVE

Business Challenges

The client's operations depended entirely on an on-premises infrastructure, with all data stored across local data centers. They used an in-house HRMS application hosted on local servers to maintain critical employee information, such as personal and professional details, work contracts, policies, and payroll data. Additionally, the client stored other business-critical files using SFTP, further complicating data management.

This infrastructure raised several challenges, including limited storage scalability, restricted data availability, complex file-sharing processes, and security concerns due to the scattered nature of their data storage systems. Accessing and providing the correct information to users quickly became a time-intensive task as the company scaled, expanding both their customer base and services while adding more employees.

As the organization grew, they faced increasing difficulties managing their expanding data and ensuring that storage needs could keep growing. The client digitized their data management processes to streamline operations and migrated existing data to the cloud. They sought a solution that would boost productivity and control the rising storage and data management costs. Moreover, they needed a secure and efficient way to archive data over seven years to meet auditing requirements.

Solutions Deployed

After evaluating various cloud options, the client chose AceCloud as their trusted partner to begin their cloud transformation journey with AWS.

Our team of cloud experts at AceCloud carefully analyzed the client's challenges and business needs, developing a tailored solution using the most effective combination of AWS services.

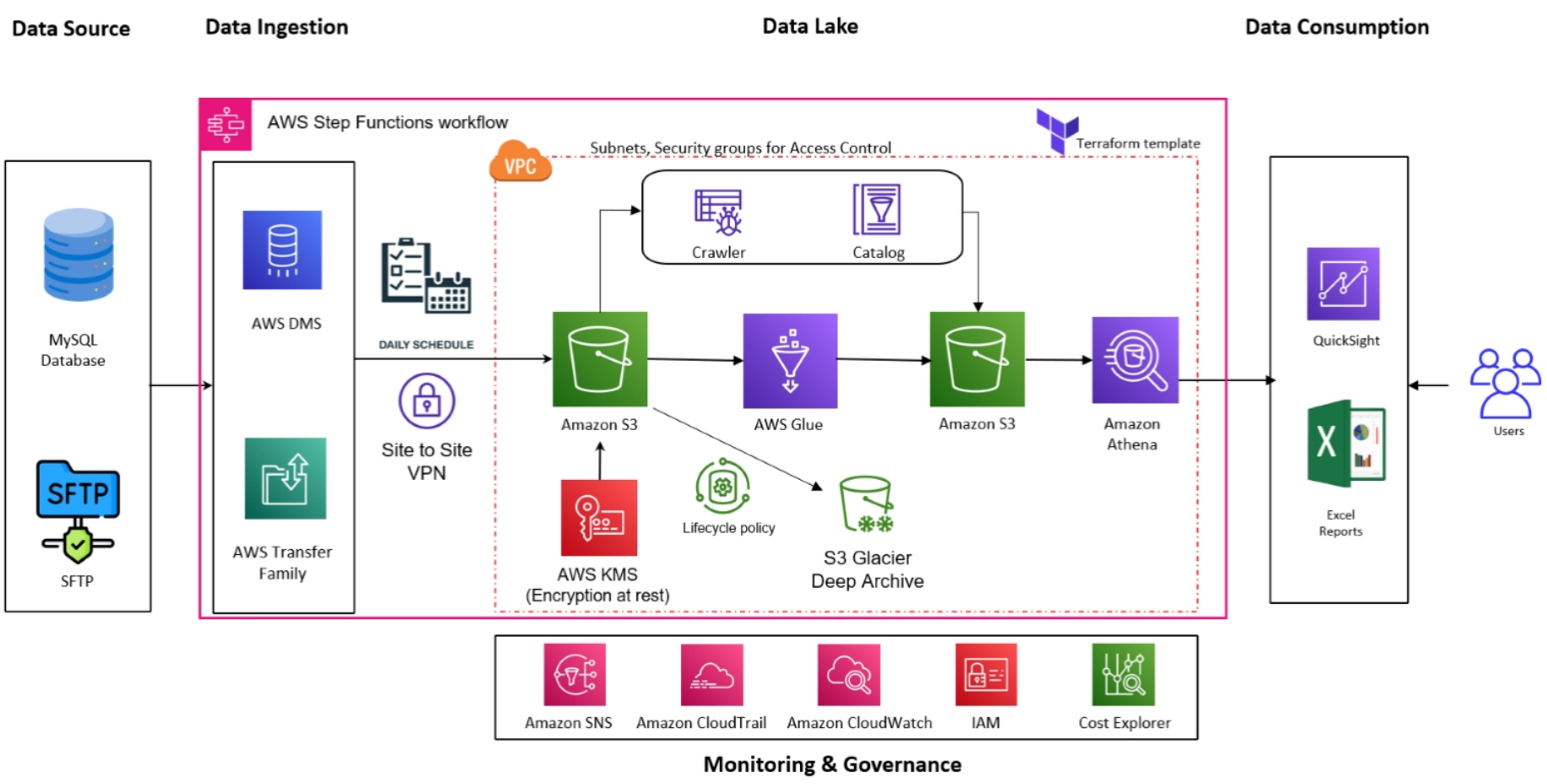
To address their data storage issues, we recommended utilizing **Amazon Simple Storage Service (S3)**. Known for its robust security, scalability, durability, and high performance, S3 was the ideal solution for their growing data needs.

The client's major data (~100GB initially, with an additional 1.2GB of incremental data daily) was retrieved from their HRMS application. **AWS Database Migration Service (DMS)** was employed to migrate this data from on-premises to the AWS cloud. DMS streamlined the process, making the migration efficient and ensuring minimal disruption to business operations.

We incorporated the **S3 Glacier Deep Archive**, designed specifically for the cost-effective, long-term storage of large data sets. This offered a competitive alternative to traditional on-premises archiving systems, meeting their requirement to archive data older than seven years for auditing purposes.

Following a successful test migration, the full-scale database migration was completed using Amazon DMS. Post-migration, we verified the accuracy and integrity of the migrated data in collaboration with the client. We also implemented monitoring and logging for the S3 storage, ensuring ongoing performance and usage tracking. In addition, comprehensive documentation was provided, covering the entire migration process, configurations, policies, and procedures to safeguard their data management strategy.

Architecture Diagram



AWS SERVICES USED

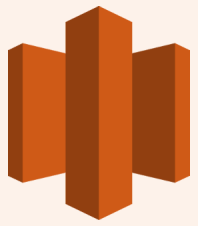
- Amazon Simple Storage Service (S3) is an object storage service built to store and retrieve virtually any data from anywhere. It offers industry-leading scalability, data availability, security, and performance.

- AWS Database Migration Service is a fully managed service that facilitates database migration from on-premises to the cloud. This service supports ongoing replication and monitoring, enabling continuous data synchronization, high availability, and minimal downtime during data migration.

- S3 Glacier Deep Archive is designed to provide durable and secure long-term storage for large amounts of data at a competitive price with off-premises tape archival services. Data is stored across 3 or more AWS Availability Zones and can be retrieved in 12 hours or less. You no longer need to deal with expensive and finicky tape drives, arrange for off-premises storage, or worry about migrating data to newer generations of media.

Amazon Simple Storage Service (S3)

AWS Database Migration Service



S3 Glacier Deep Archive

THE DECISION TO USE AMAZON SERVICES WAS BASED ON THE FOLLOWING FACTORS:

- **Data Migration:** Amazon DMS simplifies the database migration process with a user-friendly interface and supports various database engines, including Oracle, MySQL, Microsoft SQL Server, PostgreSQL, and Amazon Aurora.

- **Quick Data Retrieval on Demand:** Amazon S3 Glacier storage classes offer retrieval options tailored to customers' performance requirements. The retrieval time varies from minute to hour based on the chosen storage class and retrieval options. Specifically, the S3 Glacier Instant Retrieval storage class enabled near-instant retrieval for archives requiring immediate access. With Amazon Simple Storage Service (S3), the customer can store and retrieve any amount of data from anywhere.

- **Durability and Scalability:** Amazon S3 and S3 Glacier storage classes are powered by the world's largest global cloud infrastructure, offering virtually limitless scalability and an outstanding durability rating of 99.999999999% (11 nines). Data redundancy is ensured by storing it across multiple availability zones, which are physically segregated within an AWS Region. Hence, the customer could scale storage resources per fluctuating needs.

Conclusion

The implemented AWS solutions provided the client with a more streamlined and secure approach to data management, significantly improving their operations.

By utilizing **Amazon S3 Standard and Glacier Deep Archive**, the client significantly reduced maintenance costs—estimated at around 30%—while ensuring the long-term security and durability of their stored files. The cost-effective Glacier storage classes enabled them to archive data efficiently, aligning with their business and compliance needs.

The inclusion of **AWS DataSync** further simplified the continuous data transfer from their on-premises servers to AWS, ensuring consistent synchronization. The service also provided robust security through encryption (SSE-S3) and ensured data integrity throughout the process.

Coupled with the **AWS Database Migration Service (DMS)**, the client's database migration was executed smoothly, ensuring seamless data availability and replication.

As a result, the client experienced improved data management, secure backup capabilities, on-demand access to archived data, and overall lower maintenance costs. The flexibility and scalability offered by AWS storage solutions empowered the client to access their data from any location within a secure and reliable cloud infrastructure.

About Us

Years of Exp
15+

Data Center
10+

Awards
100+

AceCloud is a leading provider of end-to-end cloud computing solutions to global organizations across industries at scale. It offers a full spectrum of cloud services, including Public Cloud, Application Hosting, AWS Services, Managed Security Services, and Hosted Virtual Desktop Solutions.

AceCloud is a brand of Real Time Data Services (RTDS) group of companies - a leading provider of information technology capabilities specializing in Cloud Computing and Cloud Telephony. RTDS Group has an employee base of 600+ across India, the US, and the UK, supporting over 20,000+ customers and IT infrastructure in 10+ data centers spanning the globe. It offers industry-leading technological solutions that help customers streamline their operations and enhance efficiency.

As an advanced consulting and certified AWS Well-Architected Partner, AceCloud recently achieved the prestigious AWS Storage Competency and is also recognized as an Amazon RDS Service Delivery Partner. These achievements underscore its deep expertise in AWS technologies and commitment to delivering high-quality cloud solutions.

aws PARTNER Advanced Tier Services

- Public Sector
- Amazon RDS Delivery
- Storage Services Competency
- Well-Architected Partner Program

Contact Us

Are you ready to cut down your cloud spending? Contact AceCloud Experts today to get a customized quote.

awspartner@acecloud.ai

https://acecloud.ai/aws/

Our Location

2069 Oneill Dr, Bethel Park, Pennsylvania, 15102-6602

2637 E Atlantic Blvd #23519 Pompano Beach, FL 33062, Florida

Ace Tower, 809-A, Udyog Vihar, Phase 5, Gurugram 122016, Haryana, India