

Success with Applogika



Transforming Hedge Accounting for Financial Stability on AWS

Executive Summary

The **Hedge Accounting Optimizer (HAO)** was implemented for **the customer** to enhance efficiency, improve risk management, and ensure regulatory compliance. By leveraging **AWS services like Redshift, Lambda, and S3**, the solution automated data workflows, optimized hedge methodologies, and strengthened security. This resulted in a **40% increase in operational efficiency**, faster decision-making, and improved compliance adherence. Additionally, **AI-powered analytics and automated reporting** enabled better financial forecasting and reduced manual intervention.

Takeaways

Challenge

Scalability & Performance Limitations – The existing system struggled with increasing data volumes and slow hedge accounting processes.

Manual & Inefficient Processes – High dependency on manual reconciliation led to delays and operational inefficiencies.

Solution

AWS-Powered Transformation – Implemented **Amazon Redshift, AWS Lambda, and S3** to modernize hedge accounting and data processing.

Automation & AI Integration – Leveraged **AWS Glue and SageMaker** to automate workflows and enhance financial forecasting.

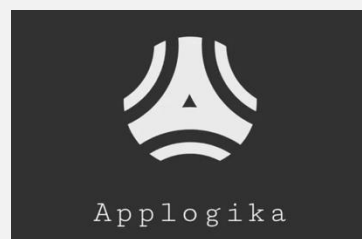
Result

40% Increase in Operational Efficiency – Automated data workflows reduced manual intervention and improved processing speed.

30% Faster Query Performance – Optimized data analytics with Amazon Redshift, improving risk assessment and reporting.

About the Customer

The customer is a leading financial services organization specializing in mortgage financing and capital markets. It ensures liquidity, stability, and affordability in the housing market while focusing on risk management, compliance, and innovation. Committed to technological advancements and customer-centric strategies, the company enhances services to meet evolving industry demands and regulations.



About the Partner

Applogika is a cloud-native services company, enables organizations to maximize the potential of their people and technology through **AWS-powered solutions**. With a focus on **accelerating time-to-value**, the company has a proven track record in delivering **scalable, secure, and efficient cloud transformations**.

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Scaling Hedge Accounting While Ensuring Efficiency & Compliance

The customer faced **significant challenges in scaling its hedge accounting processes**, as the existing infrastructure struggled to handle increasing data volumes efficiently. **Manual reconciliation and reporting processes** resulted in delays, higher operational costs, and a greater risk of errors in financial forecasting. These inefficiencies impacted **decision-making speed and overall financial risk management**.

Additionally, **ensuring compliance with regulatory frameworks such as NIST and SOX** became increasingly complex due to **inconsistent security controls and limited automation**. The lack of a **centralized, cloud-native solution** meant that data governance, access control, and encryption policies needed to be strengthened to meet **financial industry security standards**. To address these issues, a **scalable, automated, and secure** hedge accounting solution was required.

Cloud-Native Automation for Scalable & Secure Hedge Accounting

To overcome scalability, efficiency, and compliance challenges, the customer implemented the **Hedge Accounting Optimizer (HAO) on AWS**, leveraging **Amazon Redshift, AWS Lambda, and S3** for high-performance data processing. **AWS Glue** automated ETL workflows, while **Step Functions** streamlined hedge methodology assessments. This modernization reduced **manual intervention**, improved **data processing speed**, and enabled **real-time risk assessment**.

Security and compliance were strengthened through **AWS Secrets Manager for credential management, AWS KMS encryption for data security, and IAM-based access controls**. Additionally, **AWS CloudTrail and GuardDuty** provided continuous monitoring and auditing, ensuring **adherence to NIST and SOX standards**. The **fully automated, scalable cloud solution** enhanced efficiency, security, and regulatory compliance, positioning the customer for future growth.

Enhanced Efficiency, Faster Insights, and Stronger Compliance

With the implementation of the Hedge Accounting Optimizer (HAO) on AWS, the customer achieved a 40% increase in operational efficiency by automating hedge accounting workflows and reducing manual reconciliation efforts. Query performance improved by 30%, enabling faster financial analysis and risk assessment using Amazon Redshift and AWS Glue.

The cloud-native approach also strengthened security and compliance, with AWS KMS encryption, IAM-based access controls, and continuous monitoring via CloudTrail and GuardDuty ensuring adherence to NIST and SOX regulations. The scalable, automated solution now supports real-time risk evaluation, reduces operational costs, and enables future-ready financial management.

By leveraging AWS-native analytics and AI-driven insights, the customer can now predict market trends and optimize hedge strategies with greater precision. The integration of Amazon QuickSight enables dynamic reporting and visualization, providing finance teams with real-time dashboards for better decision-making. This transformation has not only enhanced accuracy and speed but also positioned the organization for scalable growth in an evolving financial landscape.

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Transforming Hedge Accounting with Cloud-Native Automation

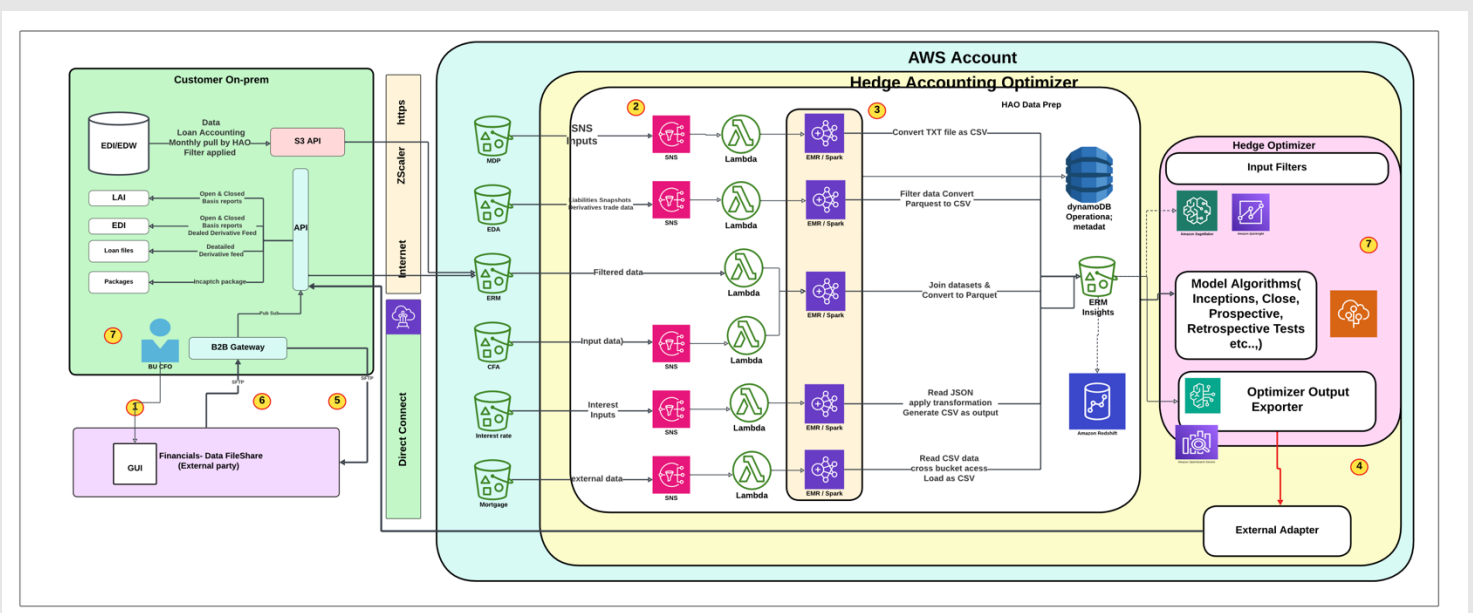
To enhance the accuracy, efficiency, and compliance of hedge accounting processes, the customer partnered with Aplogika to implement a cloud-based solution on AWS. The existing hedge accounting system faced challenges related to manual processes, scalability constraints, and compliance risks, leading to inefficiencies in financial reporting. By leveraging AWS-native services, Aplogika designed a solution that automated complex hedge accounting calculations, improved regulatory adherence, and significantly reduced operational overhead.

The cloud-native implementation provided seamless data processing, enabling real-time risk assessment and financial reconciliation. The solution integrated AWS services such as Amazon RDS for efficient data storage, AWS Lambda for automated workflow execution, and AWS Glue for data transformation. These capabilities eliminated the need for manual interventions, ensuring faster processing and increased accuracy in financial reporting.

With a modernized, automated hedge accounting system, the customer achieved enhanced financial transparency and operational efficiency. The transition to AWS reduced infrastructure costs, improved reporting accuracy, and ensured compliance with evolving financial regulations. The scalable architecture now supports future growth, allowing customer to manage hedge accounting with greater agility and confidence.

Additionally, the new solution provided advanced analytics and reporting capabilities, empowering financial teams with deeper insights into risk exposure and hedging performance. By leveraging AWS's high availability and disaster recovery features, the customer enhanced resilience against system failures, ensuring uninterrupted financial operations. This transformation positioned the company to adapt swiftly to regulatory changes while optimizing its financial strategies.

Architecture Diagram



Transforming Hedge Accounting for Financial Stability on AWS



Challenges: Legacy Infrastructure & Compliance

The customer faced multiple challenges with its legacy hedge accounting system, including:

- Manual Processes & Scalability Limitations** – The existing system relied on manual processes, leading to inefficiencies and slow data reconciliation.
- Regulatory Compliance Risks** – Adapting to evolving financial regulations required a flexible and scalable solution to ensure accurate reporting.
- High Operational Costs** – Managing hedge accounting workflows on on-premise systems was costly and lacked scalability.

Solution: Cloud-Driven Hedge Accounting Optimization

To address these challenges, Aplogika designed and implemented a cloud-native hedge accounting optimization (HAO) solution using AWS. The key solution components included:

- AWS-Enabled Automation** – AWS Lambda, Step Functions, and Amazon S3 automated hedge accounting workflows, reducing manual intervention.
- Scalable Data Processing** – Amazon RDS and AWS Glue provided scalable and efficient data storage, transformation, and reporting.
- Enhanced Security & Compliance** – AWS Identity and Access Management (IAM) and encryption mechanisms ensured compliance with financial regulations.

Results: Improved Accuracy, Speed, and Cost Savings

With the AWS-powered hedge accounting solution, the customer achieved:

- 40% Increase in Operational Efficiency** – Automation significantly reduced manual effort, accelerating accounting processes.
- Enhanced Compliance & Accuracy** – Real-time data processing and audit trails ensured financial accuracy and regulatory adherence.
- 30% Reduction in Infrastructure Costs** – Migrating to AWS eliminated expensive on-premise infrastructure, optimizing cost efficiency.