

Case Study- Data Warehouse

Challenge:

Wealth Management Company needed to overcome significant challenges in **scaling personalized wealth advisory services** while maintaining operational efficiency and regulatory compliance. The existing IT infrastructure struggled to handle the increasing volume and complexity of client portfolios, real-time data processing, and integration across multiple platforms. Additionally, siloed data systems made it difficult to gain a unified client view, affecting both advisory quality and service speed.

To stay competitive, Wealth Management Company required an **intelligent, scalable, and integrated IT ecosystem** capable of delivering personalized insights, streamlining workflows, and ensuring robust security and compliance in a highly regulated industry.

Solution:

We addressed Wealth's business and IT challenges by designing and implementing a **cloud-native data platform on AWS**, capable of ingesting, transforming, and analyzing large volumes of data from multiple source systems with flexibility and precision.

Primary AWS Services Used:

1. AWS Glue

- a. Used for data ingestion, transformation (ETL), and metadata management
- b. Built automated pipelines to clean, standardize, and enrich data from multiple sources
- c. Integrated business logic for batch reversal, product mapping, and compliance tagging

2. Amazon S3

- a. Served as the central **data lake** for raw, processed, and curated datasets
- b. Enabled cost-effective storage with lifecycle policies for archiving older data
- c. Provided a secure and scalable storage backbone for downstream analytics

3. Amazon Redshift

- a. Used as the core **analytical data warehouse** for client-level reporting, dashboards, and ad-hoc queries
- b. Supported high-performance analytics on millions of transactional records
- c. Enabled role-based access to ensure only authorized users accessed sensitive data

Benefits:

- **Slow Changing Dimension (Entity, Sub-Lob, and Reporting):** Enables accurate historical data tracking with dynamic changes in dimensional attributes like entity, sub-LOB, and reporting units.
- **Dynamic Reporting Level Structure:** Provides flexible, multi-level reporting hierarchies that adapt to evolving business needs.
- **Global Scalable Dimensions:** A centralized and Scalable dimension structure supports data consolidation across multiple geographies and business units.
- **Mapper Structure for Sub-Lob and Entities:** Offers customization mapping for seamless alignment between sub-LOBs and associated entity relationships.
- **Ad Hoc Reports from Data Lake:** Enables on-demand report generation with instant access to curated and raw data, improving decision-making agility.
- **Scalable Containers for Reverse/Draft Calculations:** Facilitates efficient recalculations for data reversals and draft entries, enhancing audit-ability and data accuracy.
- **Process Dashboard:** Empowers users with real-time monitoring and drill-down insights into ETL and business processes.
- **Unique Client Identification (UCC): Establishes** a standardized client ID system across all platforms, improving data consistency and client-level insights.