



HEXWARE

Data Modernization using AWS Cloud

Amplifying data access and availability for a
Fortune 500 mortgage company

Case study

Client

| Client

Challenge

Solution

Benefits

Summary

Our client is a distinguished Fortune 500 financial services firm with a robust portfolio encompassing mortgages related to single-family, multi-family, and capital markets business units.



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Modernizing mortgage processes through technology integration, such as the use of AI, has the potential to streamline operations, reduce costs, and enhance customer experiences. However, our client was constrained by an outdated data environment that couldn't support this growth vision.

Our client relied on an extensive data integration and processing infrastructure to manage data from customers, investors, and dealers for its Enterprise Data Warehouse (EDW). The EDW Database houses critical data, including seller, servicer, party, issuer, borrower, and guarantor data, stored in an on-premises Oracle database.

Our client faced significant challenges with its on-premises database from the pace at which its data volume grew, resulting in unavoidable downtimes and a lack of fault tolerance within their data ecosystem. The challenges our client faced with data:

- **On-premises data integration processes introduced latency issues, impeding access to real-time data for analytics.** Integrating data from different sources into the Oracle database using Informatica is complex, particularly when dealing with diverse data sources, formats, and data transformations.
- **As data volume grew, performance declined due to limited scalability and the increasing processing demands of complex queries.**

Designing and maintaining intricate data models in Oracle, especially with interrelated tables and complex relationships, further exacerbated these issues, significantly impacting the client's operational efficiency.

These limitations hindered their ability to respond to market needs and compromised customer satisfaction. Advanced technologies, including AI for property valuation and loan underwriting, could help address inefficiencies but require new data infrastructure. Furthermore, managing an on-premises Oracle database was expensive due to hardware, maintenance, and licensing costs.

Ultimately, the downtime risked impacting production, particularly for applications intolerant to significant interruptions during on-premises to cloud database migration. For this, a cloud migration had to be carefully planned and executed precisely, avoiding potential pitfalls.



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Without modernized cloud-native data infrastructure, the challenges would persist, highlighting the crucial role of cloud solutions in supporting data strategies for evolving businesses.

In this case, our client’s Enterprise Data Warehouse (EDW) for its mortgage services needed an overhaul, so we chose AWS Relational Database Service (RDS) on PostgreSQL to support their rejuvenated data environment.

Amazon RDS on PostgreSQL simplifies the setup, operation, and scaling of relational databases in the cloud by automating time-consuming administrative tasks like hardware provisioning, database setup, patching, and backups. An AWS RDS migration would provide a centralized and integrated view of data from various sources, breaking down silos and facilitating a unified data analysis.

Shifting to AWS Relational Database Service (RDS)

The customer sought a partner to develop a data modernization strategy and roadmap for shifting to AWS cloud, aiming to build and manage their data infrastructure on the cloud. They opted for an optimized environment for better cost management, high data availability for advanced analytics, and cloud-based security protocols.

Informatica supported its analytics needs for ETL processes and Autosys for scheduling, significantly enhancing data accessibility for downstream reporting systems. As part of Hexaware’s solution, the Oracle-stored data was migrated to AWS RDS. Each record in AWS RDS comprises multiple columns representing data from various sources uploaded at different times.

We enabled multiple new-age data capabilities with our data modernization initiatives:

- Streamlined data ingestion and triggered processing
- Efficient Pyspark data processing with AWS Elastic MapReduce (EMR)
- Seamless data workflow orchestration with AWS Step Functions
- Automated data refresh for real-time relevance
- Data integrity and accuracy with AWS RDS
- Optimized data storage and query performance
- Enhanced data accessibility with AWS Glue
- Controlled data access and scalability with Redshift Spectrum

These capabilities enhance business functions by enabling streamlined data management from ingestion through processing and storage optimization. They ensure operational efficiency with seamless workflow orchestration and automated updates, while also guaranteeing data integrity, accessibility, and scalable controlled access for robust operational scalability and AI-powered intelligence systems.



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Data Infrastructure Benefits

Accelerated Data Processing Efficiency

Leveraging Amazon EMR and PySpark cuts processing time by 60-70%, boosting operational efficiency.

Real-Time Data Accessibility

Automated data refresh ensures up-to-date data for timely decision-making, reducing latency.

Data Democratized for Multiple Users

Simplified data sharing empowers users with actionable insights for strategic decision-making.

Secure and Efficient Data Analysis

End users analyze data securely without direct file access, enhancing data governance.

Improved Data Access Protocols

AWS Glue creates tailored views, ensuring users access only relevant and current information.

Efficient Data Processing with Automation

Streamlined data flow and automation reduce manual efforts and errors in processing and consolidation.

Business Benefits

Seamless Oracle database migration to AWS Cloud

Our data modernization strategy ensured a secure and swift database migration from on-premise to AWS cloud with minimal application downtime.

Cost-Effective Performance Boost

Infrastructure costs decreased post-migration, enhancing application performance, especially during peak activity.

Agility for its Mortgage Operations

AWS Cloud provides flexibility, enabling swift adaptation to evolving mortgage service demands.

Cloud Cost Optimization

Efficient resource utilization and scalability reduce costs, ensuring a competitive edge in the market.

Enhanced Security and Compliance

Robust cloud security measures safeguard sensitive mortgage data, ensuring regulatory compliance and customer trust.

Uninterrupted Customer Services

High availability and fault tolerance mechanisms prevent downtime, sustaining seamless mortgage operations.



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We seamlessly translate strategic visions into actionable plans, and data modernization initiatives ensure our client meets strategic goals. Uninterrupted data services, ensured by high availability for advanced analytics, reinforce our client’s commitment to seamless mortgage operations.

Data enrichment is pivotal in the mortgage sector, as it improves creditworthiness assessments and predicts market trends. With the rise of non-qualified mortgages and the gig economy, traditional credit evaluation methods have become less effective. Enhanced data insights allow lenders to better understand borrower behavior and financial stability, leading to more informed lending.

Our case study is a perfect example of how data modernization efforts can be enhanced with cloud solutions. In this case, AWS’s vast suite of products helps build a new outlook on data. These solutions enable advanced analytics and equip businesses with unparalleled data readiness.

About Hexaware

Hexaware is a global technology and business process services company. Our 30,000+ Hexawarians wake up every day with a singular purpose; to create smiles through great people and technology. With this purpose gaining momentum, we are well on our way to realizing our vision of being the most loved digital transformation partner in the world. We also seek to protect the planet and build a better tomorrow for our customers, employees, partners, investors, and the communities in which we operate.

With 50 offices in 19 countries, we empower enterprises worldwide to realize digital transformation at scale and speed by partnering with them to build, transform, run, and optimize their technology and business processes.

Learn more about Hexaware at www.hexaware.com.

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