

A woman and a man in white lab coats are in a laboratory. The woman is smiling and looking at a tablet held by the man. The man is wearing safety glasses and blue gloves. A microscope is visible in the foreground.

HEXAWARE

Transforming Medicaid Payer Operations: On-Premises Data Lake Assessment and Cloud Migration

Strategic data lake migration to cloud

Case study

Client

| Client

- Challenge
- Solution
- Benefits
- Summary

Our client stands as a beacon of health equity in the United States, dedicated to improving the lives of underserved communities. With a commitment to serving low-income, chronically ill populations, they offer a comprehensive suite of healthcare solutions. These include Medicaid, Medicare, Children's Health Insurance Program (CHIP), and pharmacy benefits, all tailored to meet the unique needs of their clientele. Their mission is to bridge the healthcare gap, ensuring that quality care is accessible to all.



Challenge

Client

Challenge

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Summary

The client’s journey towards fulfilling their mission was hindered by several operational and technological challenges:

Scalability Issues: The client’s Hadoop-based infrastructure was struggling to keep pace with the rapid growth of their customer base, hindering their ability to scale services effectively.

Operational Silos and Management Complexity: A fragmented data lake architecture, with independently managed workspaces by various business units, created significant hurdles in platform management and cross-functional data integration.

Data Security Concerns: The lack of governed workspace access led to security vulnerabilities, adding to the operational complexities of managing the data lake environment.

Integration of Quality Data: The existing infrastructure lacked the capability for seamless integration of business-critical data quality rules, impacting the reliability of data-driven decisions.

Handling Complex Data Volumes: Managing and processing data from diverse sources, running into terabytes, posed a significant challenge, affecting business user efficiency.

High Maintenance Costs: The cost of keeping databases on-site was too high, mainly due to the expenses related to administration and hardware, making it unsustainable.



Solution

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The Hexaware solution

To navigate these challenges and support the client’s growth trajectory, Hexaware initiated a comprehensive data migration and optimization strategy:

- Conducted a detailed assessment of the existing on-premises data lake, identifying key areas for migration and optimization.
- Migrated 7 Hive Workspaces and associated data from Cloudera Hadoop to Azure Cloud, leveraging Databricks while factoring in a domain-driven approach and handling these complex migrations with a framework-driven approach.
- Transformed ETL logic from SAS to PySpark/Spark SQL, facilitating seamless end-to-end workflow migration to Databricks, leveraging advanced automation tools while ensuring efficiency and accuracy.
- Provided a strategic roadmap for the optimization of the Enterprise Data Warehouse (EDW) environment, preparing the ground for future enhancements.
- Migrated 13 on-premises Tableau dashboards to Tableau Cloud, employing a lift and shift strategy for quick and effective transition.
- Refactored and optimized ETL codes for improved data load performance, utilizing Databricks notebooks.
- Designed a target architecture that leverages the strengths of Databricks, Delta Lake, and Databricks SQL, setting a new standard for operational excellence in data management.



Benefits

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The strategic migration and optimization efforts led to significant improvements in operational efficiency and strategic outcomes:

Accelerated Processing Efficiency: The transition to Databricks significantly enhanced the processing speed across the entire data workflow, from source to consumption, enabling quicker insights and decision-making.

Improved Data Governance: The implementation of robust data access control measures in the consumption workspaces ensured enhanced data security and governance, aligning with best practices.

Cost Optimization: A notable 15% reduction in costs was achieved by optimizing compute resource utilization and streamlining maintenance processes, demonstrating the financial viability of cloud migration.



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Hexaware’s strategic intervention transformed the data management landscape for one of the largest healthcare companies in the USA. Through a focused approach on legacy infrastructure migration, data security enhancement, and operational optimization, we delivered a solution that not only addressed immediate challenges but also laid the groundwork for sustained operational excellence. This case study exemplifies Hexaware’s commitment to leveraging technology in empowering healthcare providers to serve their communities better, with efficiency, security, and scalability at the forefront.



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
<https://www.hexaware.com>.

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