

Client Overview

In the bustling digital economy of Southeast Asia, seamless transactions are the lifeblood of modern mobility. At the forefront of this revolution is the client—a trailblazer in contactless payments, empowering public transit networks and diverse sectors nationwide. With over 40 million contactless cards in circulation, they have transformed how people move and redefined convenience for millions. Given the scale of their operations and the large volume of daily transactions, a real-time understanding of their business was crucial. However, their existing traditional database system (Oracle) could not efficiently handle real-time data retrieval.

Fintech Leader Tackled Database Limitations to Unlock Real-Time Insights

The project's primary goal was to overcome the constraints of the client's existing database system, which hindered their ability to process and analyze data in real-time. By implementing a more advanced and scalable solution, the client aimed to unlock deeper business insights, streamline operations, and optimize decision-making. This transformation was crucial in enhancing operational efficiency, refining business processes, and ultimately delivering a superior customer experience. They required a new system to empower the client with real-time data analytics, ensuring agility in responding to market demands and improving overall service quality.

Key Requirement:

- Design and develop effective data archiving and load balancing for the query load.
- ▶ Build and validate the connectors to the various data sources that would feed into the Data Warehouse.
- ▶ Additional responsibilities included moving data from an on-premises setting to the cloud (from Oracle to Azure SQL DW).
- create customized reports and dashboards based on key performance indicators (KPIs) using real-time data.

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Seamless Cloud Shift

Indium designed and implemented a robust, highly scalable Data Warehouse ecosystem to meet the client's growing data storage and processing demands. This modern architecture was tailored to efficiently handle large volumes of transactional and analytical data efficiently, ensuring seamless data integration, faster processing speeds, and enhanced reliability.

By leveraging advanced data management techniques, Indium enabled the client to centralize and streamline their data operations, paving the way for real-time analytics, improved decision-making, and overall business agility. We successfully achieved the desired result by implementing the following steps:

Implementation of NiFi:

Indium utilized NiFi to obtain near real-time data for the Data Warehouse.

Leveraging Azure BLOB for data archiving and staging:

Indium efficiently archived and staged the data using Azure BLOB, ensuring effective data management.

Bulk loading data to Azure SQL DW:

The data generated through contactless payment cards was bulk loaded from Azure BLOB to Azure SQL DW to handle the significant data traffic resulting from day-to-day transactions.

Data aggregation for data visualization:

Indium implemented an additional layer in the Data Warehouse to aggregate the data, making it easier to present and visualize using Power BI.



Transforming Business Operations with a Scalable Data Warehouse Ecosystem

The deployment of the advanced Data Warehouse ecosystem by Indium brought substantial business benefits, revolutionizing the client's data management capabilities. By overcoming the limitations of their legacy system, the new solution enabled seamless data integration, real-time analytics, and improved operational efficiency. This transformation empowered the client with,

- ▶ Improved data visualization quality: The Data Warehouse resulted in an 80% improvement in the quality of data visualization, enabling better insights and decision-making.
- ▶ **Cost reduction**: Migrating a large volume of data from Oracle to SQL Server using open-source ETL tools led to a 30% cost reduction.
- ▶ **Enhanced performance:** Performance tuning of the ETL jobs reduced overall processing time by 50%, improving data processing efficiency and timeliness
- Secure data recovery: The efficient archival capabilities enabled by the cloud environment and the implementation of alert systems ensured data recovery was secure. This allowed for quick action in disaster recovery scenarios.



About Indium

Indium is an Al-driven digital engineering company that helps enterprises build, scale, and innovate with cutting-edge technology. We specialize in custom solutions, ensuring every engagement is tailored to business needs with a relentless customer-first approach. Our expertise spans Generative Al, Product Engineering, Intelligent Automation, Data & Al, Quality Engineering, and Gaming, delivering high-impact solutions that drive real business impact.

With 5,000+ associates globally, we partner with Fortune 500, Global 2000, and leading technology firms across Financial Services, Healthcare, Manufacturing, Retail, and Technology—driving impact in North America, India, the UK, Singapore, Australia, and Japan to keep businesses ahead in an Al-first world.

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