BytePlus | **digiplus**

Case Study

DigiPlus — Propelling Digital Entertainment To New Heights

Leading a new era of digital entertainment

DigiPlus is one of the fastest growing digital entertainment companies in the Philippines that operates the country's leading digital platforms. In 2023, DigiPlus' growth was driven by the strong performance of its digital retail segment, boosted by the introduction of new platforms and cost efficiencies as the business continues to gain scale. The company grew its Net Income to **PHP 4.1B**, a **596% increase Year on Year** and **PHP 27.3B Revenue**, a **306% growth year on year**.

DigiPlus continues to establish itself as the most innovative digital entertainment that harnesses of the power cutting-edge technologies to multiply the fun and happiness in peoples' lives anytime and anywhere.

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Data Excellence:
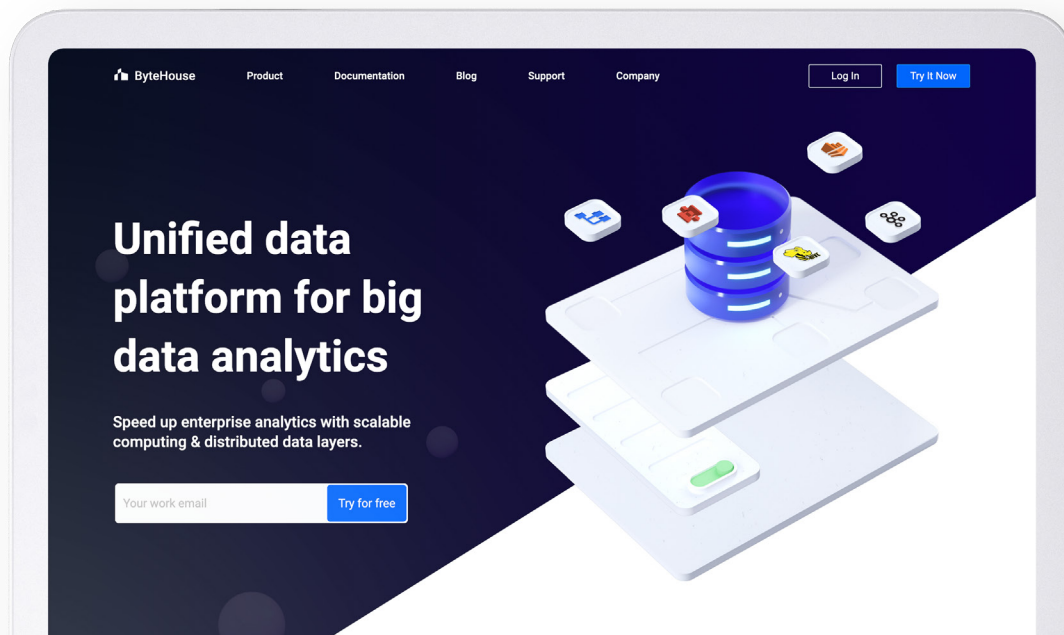# Seizing the Moment for Competitive Advantage

As DigiPlus navigated the rapidly evolving digital entertainment industry, the company encountered several challenges. DigiPlus saw the need for seamless data fusion and integration, real-time data analysis, robust security and compliance measures, scalability, and flexibility in the face of increasing data volumes. As a leader in digital entertainment, the company continues to find ways to innovate its operations through data excellence.

One of the most significant hurdles DigiPlus faced was the integration of data from multiple sources into its self-built data warehouse. This challenge was further compounded by the need to integrate user behavior data, transaction data, and game data from various sources for in-depth analysis, cleaning, and merging operations.

In the fast-paced world of digital entertainment, real-time or near-real-time data analysis is crucial for market responsiveness and user experience optimization. DigiPlus recognized the necessity of this capability but discovered that its existing infrastructure posed limitations. Additionally, operating in a highly regulated industry necessitated stringent data security measures and in compliance with laws and regulations, adding another layer of complexity to the company's data management efforts.

As DigiPlus continued to grow, the need for online flexible scaling of computing resources became apparent. The company required a solution that could handle the rapidly increasing data volume and processing demands without compromising performance or efficiency.

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Partnering with BytePlus:
A Transformative Solution

To overcome these challenges and unlock the full potential of its data, DigiPlus collaborated with BytePlus' ByteHouse, a highly integrated cloud-native data analytics and warehousing solution. ByteHouse's comprehensive suite of features, including real-time multi-source data access, powerful ELT capabilities, elastic automatic scaling, real-time analysis, near real-time reporting, and robust security and compliance measures, promised to revolutionize DigiPlus's data management and analysis processes.

1. Real-time Multi-Source Data Access

ByteHouse utilizes AWS MSK and Flink to synchronize data from enterprise SQL databases in real-time. Flink CDC enables real-time synchronization of MySQL data, requiring data to be warehoused in real-time. During peak periods, ByteHouse can handle up to 50,000 TPS while ensuring data integrity through accurate transaction data verification.

2. ELT for Data Fusion

ByteHouse offers powerful SQL processing and data processing functions, supporting complex data transformation operations within the data warehouse.

With ByteHouse's elastic scaling of computing resources, DigiPlus can flexibly adjust resources during the transformation of billions of data records, accelerating processing speeds and reducing costs after completion. This ensures a fast and economical data fusion process.

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3. Elastic Automatic Scaling

ByteHouse can automatically scale computing resources based on data processing requirements without manual intervention, helping DigiPlus meet data processing demands during peak business periods.

4. Real-time Analysis

ByteHouse achieves high performance through vectorized query execution and columnar storage, accelerating data analysis processes and improving query response times to millisecond levels.

By separating storage and computing layers, ByteHouse enables scalable computing and distributed storage, supporting DigiPlus's high-concurrency real-time queries and analysis.

5. Near Real-time Reporting

ByteHouse supports data loading based on streaming data (Apache Kafka) and efficient ELT capabilities, enabling near real-time (<0.5 hours) data generation to reporting.
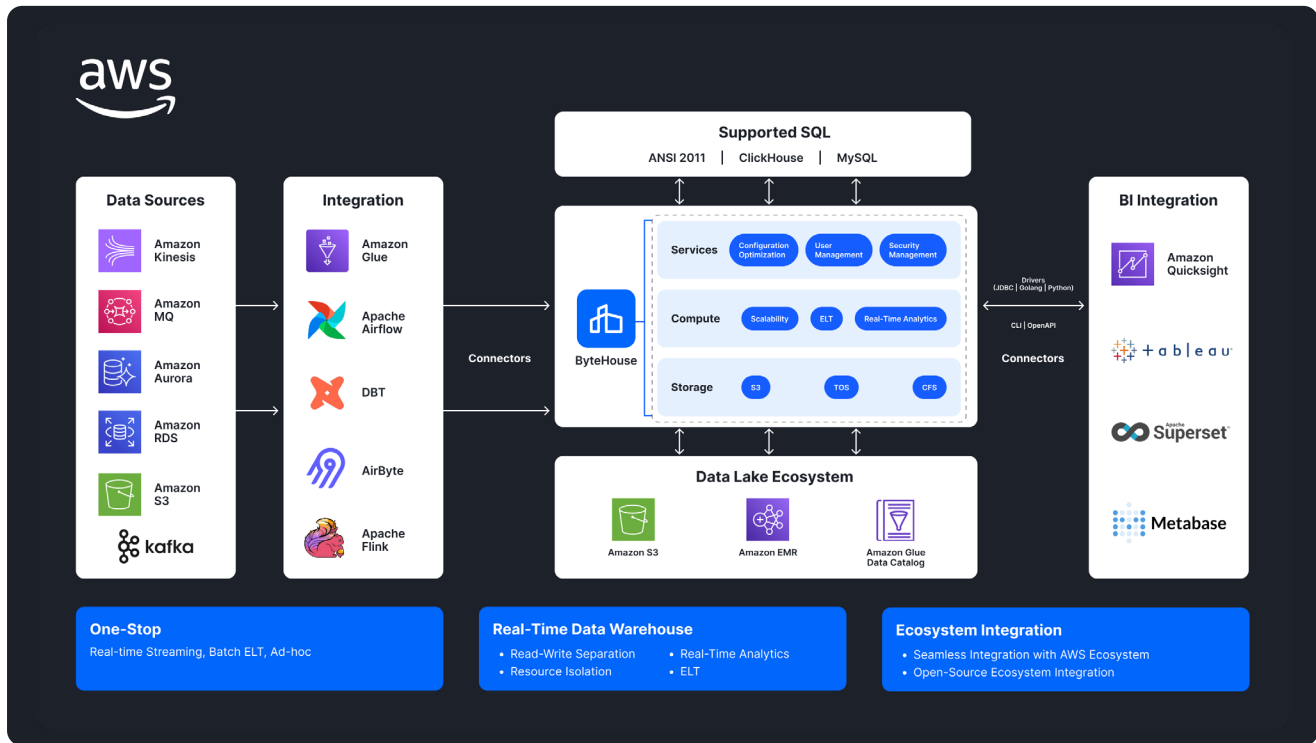
6. Security and Compliance

ByteHouse provides multi-level security measures, including data encryption, tenant isolation, network isolation, and access control, ensuring the security of DigiPlus's sensitive gaming data during transmission and storage.

The Philippine gaming industry is subject to strict laws and regulations. ByteHouse helps DigiPlus comply with relevant data protection and privacy regulations through secure data processing and storage solutions.

ByteHouse offers real-time monitoring and auditing functions, helping gaming industry clients promptly detect and respond to security threats, maintaining business transparency and traceability.

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ByteHouse Architecture:
Designed for ultra high-volume Data Processing and Analytics

ByteHouse's architecture, designed to handle continuous, ultra high-volume data ingestion and complex data transformation needs, proved to be a game-changer for DigiPlus. The platform's ability to integrate with various data sources, such as Amazon Kinesis, Amazon MQ, Amazon Aurora, and Amazon RDS, as well as its support for streaming, ETL, and ad-hoc query capabilities, ensured that data was correctly formatted and readily available for analytical needs.

The ByteHouse SQL engine, capable of interfacing with ANSI 2011, ClickHouse, and MySQL, served as the central processing unit, handling data warehousing operations and analytics workflows with ease. The platform's integration with popular business intelligence tools and platforms, such as Amazon QuickSight, Tableau, Superset, and Metabase, enabled DigiPlus to create comprehensive dashboards and reports that drive data-driven decision-making.

A Game-Changer in Data Management and Analysis

King Jin, big data lead at DigiPlus, shared his enthusiasm for the ByteHouse platform:

"Since we partnered with ByteHouse, we've noticed significant improvements in our operational efficiency. It's worth noting that ByteHouse's comprehensive suite has been a major catalyst for us, greatly enhancing our data handling and processing capabilities."

He further elaborated on the impact of ByteHouse's real-time synchronization solutions and advanced data analytics capabilities:

"ByteHouse's real-time synchronization solutions, powered by AWS MSK and Flink, have been crucial in enabling real-time warehousing of data from enterprise SQL databases. Furthermore, Flink's Change Data Capture (CDC) capabilities allow us to synchronize MySQL data seamlessly, handling peaks of up to 50,000 TPS with ByteHouse's data warehouse. Ensuring data integrity during these transactions has been paramount, and ByteHouse has delivered on this front as well."

The ByteHouse platform has not only streamlined DigiPlus's data management processes but has also empowered the company to make data-driven decisions with greater speed and precision. As King Jin noted, **"The integration of these advanced data solutions has transformed the way we approach data management, making our operations more agile and responsive."**

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A New Era of Data-Driven Success

With ByteHouse as its trusted partner, DigiPlus has entered a new era of data-driven success. The platform's real-time analysis and near real-time reporting capabilities have enabled the company to quickly gain insights, optimize user experience and marketing strategies, ultimately enhancing customer satisfaction and revenue.

Moreover, ByteHouse's advanced security measures and data protection mechanisms have helped DigiPlus ensure customer data security, comply with industry regulations, and maintain its stellar corporate reputation.

As DigiPlus continues to navigate the ever-evolving gaming industry, the company remains confident in its ability to maintain a leading position in the competitive market, thanks to its partnership with ByteHouse. The journey to data excellence, once fraught with challenges, has now become a story of transformation, innovation, and success.

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