ORCHESTRATING A SCALABLE ENTERPRISE BI INFRASTRUCTURE AT 5X THE SPEED

SNOWFLAKE BENEFITS

- Intuitive, fully managed data warehouse for faster prototyping of BI visualizations
- Near infinite scalability to support any amount of data, users, and workloads
- Per-second pricing for a lower total cost of ownership

COMPANY	Yamaha Corporation of America	**GOALS**	Elevate business intelligence through rapid iteration
LOCATION	Buena Park, CA	**WEBSITE**	usa.yamaha.com
INDUSTRY	Musical instruments		
EMPLOYEES	50,000+		

Yamaha Corporation of America (Yamaha) is a wholly-owned subsidiary of Yamaha Corporation in Japan, the world's largest manufacturer of musical instruments. Sold through a network of authorized dealers, Yamaha's product line includes a comprehensive assortment of pianos, electronic keyboards, guitars, percussion, brass, woodwinds, and audio/visual equipment. To deliver timely insights to more than 230 BI users, Yamaha ingests and analyzes large amounts of transactional and relationship data.

THE CHALLENGE: Reducing time to insight for sales, marketing, and inventory management teams

Seeking to accelerate the development, deployment, and iteration of data visualizations for BI users across sales, marketing, support, and finance, Yamaha's IT team began exploring infrastructure enhancements.

Restrictive licensing agreements and inflexible capacity scaling made Yamaha's on-premises database management system incapable of supporting high-growth data storage and compute needs. Increased Tableau usage during peak hours compounded the problem. "Our legacy system took three minutes to render a single visualization," Yamaha's Director of Information Technology, Ishwar Bharbhari, said. Yamaha refreshed data sets only during nonpeak hours to avoid further contention, leading to stale insights and delayed decision-making.

Manual performance tuning and outage troubleshooting inhibited the team's ability to prototype innovative visualizations in Tableau.

THE SOLUTION: A cloud data platform designed for enterprise BI

Determined to deliver data visualizations that load in 30 seconds or less, the team turned to Snowflake Cloud Data Platform.

Snowflake ingested a massive data set of roughly 4 million enterprise relationship management (ERP) records in six minutes, 5X faster than other data warehouses. The total dataset contains over 910 million records. AWS and Informatica integration combined with per-second pricing made Snowflake the most streamlined and affordable source of truth for all of Yamaha's data.

Snowflake's data-warehouse-as-a-service model, intuitive interface, fully compliant ANSI SQL, stored procedures, and ability to time travel reduced administrative work and freed up bandwidth for development. "Snowflake lets us develop and iterate faster, which leads to a better BI product for end users," Bharbhari said.

In addition, Snowflake's multi-cluster shared data architecture and flexible capacity scaling aligned with Yamaha's expanding BI needs, eliminated resource contention, enabled fresher data imports, and expedited visualization rendering in Tableau.

> " **Snowflake positively impacts our top-line growth by increasing our ability to develop BI solutions that elevate analysis of sales, inventory, and dealer relationship data.**"
>
> **-ISHWAR BHARBHARI,** Director of Information Technology at Yamaha Corporation of America

THE RESULT: Near real-time insights at a lower cost of ownership

Accelerated prototyping and iteration creates a continuous feedback loop between Tableau users and the IT team, resulting in higher impact visualizations for less effort. Expedited report rendering in Tableau boosts productivity and empowers staff to make data-driven decisions in less time.

Hourly ingestion of Yamaha's ERP and Salesforce data into Snowflake provides timely sales insights about dealer order volume, customer credit limits, inventory availability, and pipeline performance. Success teams monitor product support metrics from Salesforce to measure customer satisfaction and decide when to ramp up hiring. Marketing and finance teams rely on data in Snowflake to inform a variety of pricing and budgetary decisions.

Snowflake's near-zero management infrastructure and per-second pricing deliver a tangible cost savings. "Total cost of ownership is lower with Snowflake, especially when training and system consolidation are considered," Bharbhari said.

THE FUTURE: Accelerating growth with predictive analytics

Machine learning models, powered by Snowflake, will take data analytics to a new level at Yamaha. Displaying in Tableau a dealer's propensity to buy, for example, could help the sales team identify new revenue opportunities in fewer steps.

Role-based access controls could also be on the roadmap at Yamaha. "Snowflake's built-in role-based controls will further simplify system administration while keeping pace with the company's overall data accessibility needs," Bharbhari said.

WHY SNOWFLAKE

ETL integrations streamline ingestion of large data sets

Native SQL support expedites data exploration and management

Separate storage and compute eliminates reporting delays

Instantly elastic architecture scales to support any amount of users and BI visualizations

Data warehouse as a service frees up capacity for increasing analytics

Per-second pricing lessens the total cost of ownership

ABOUT SNOWFLAKE

Snowflake's cloud data platform shatters the barriers that have prevented organizations of all sizes from unleashing the true value from their data. Thousands of customers deploy Snowflake to advance their organizations beyond what was possible by deriving all the insights from all their data by all their business users. Snowflake equips organizations with a single, integrated platform that offers the only data warehouse built for the cloud; instant, secure, and governed access to their entire network of data; and a core architecture to enable many types of data workloads, including a single platform for developing modern data applications. Snowflake: Data without limits. Find out more at **snowflake.com**

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