



Chime Delivers a Personalized Customer Experience Using Snowflake

chime

CUSTOMER Chime

PARTNER Snowflake



CASE STUDY

Chime (*chimecard.com*) is smarter banking for the mobile generation, designed to help people lead healthier financial lives and automate their savings. Chime members get a Chime Visa Debit Card and an FDIC insured deposit account and savings account that helps them save money without thinking about it. Chime has created a new approach to banking that doesn't rely on fees, doesn't profit from members' misfortune or mistake, and helps members get ahead financially.

"Chime is designed for the millennial generation who expect services to be personalized and mobile-first. They want to manage all aspects of their lives through their phone, including how they manage their money," said Ethan Erchinger, Chime's Director of Operations.

"The advantage of having direct load of the JSON with Snowflake has made the task far more efficient. Querying data is now dynamic. With Snowflake we saw a 3-4x increase in performance with all data, including JSON data, which is pretty awesome."

– Ethan Erchinger, Director of Operations, Chime

THE CHALLENGE

Transforming Lots of Data from Third-Party Services

To provide a more modern and personalized banking experience, Chime integrates myriad services to its leading-edge technology infrastructure. By analyzing data across mobile, web and backend server platforms, Chime can identify ways to enhance the member experience while delivering value to the business.

Previously, analyzing a member's engagement and other key business metrics was a laborious task that involved pulling and analyzing data from a large number of services like Google and Facebook, as well as events from other third party analytics tools—most of that data being JSON docs. Chime needed a solution that would enable them to gather the data into a single location for analysis in order to enhance the experience that Chime could provide to its members.

To do so, Chime would need to migrate from a legacy cloud data warehouse to a solution which would offer improved performance and the ability to query data using standard SQL. Additionally, the team needed a way to process new data sources like JSON, and query these using standard SQL database tables.

Chime also uses a product called Segment.io, which sends customer activity events, in raw JSON form, for analysis. Because every JSON event source is unique, every time a new type of event was collected, a new schema design was required. Chime needed a more efficient solution that would allow them to focus on deriving value from data rather than transforming and integrating data into their system.

To improve the efficiency, Chime also needed a solution that would reduce the cost associated with their data analytics toolsets as their business scaled. Integration with Looker was another key requirement.

WHY SNOWFLAKE?

Chime Uses Snowflake to Put Its Data to Work Faster

Chime originally started evaluating Snowflake because of Snowflake's native integration with the Looker BI tool. After selecting the Snowflake Elastic Data Warehouse, Chime was able to simplify its data pipeline, putting JSON data to work faster compared to other big data platforms such as Hadoop.

Chime selected Snowflake because:

- Snowflake efficiently delivers semi-structured and structured data from various sources easily, without significant transformation effort, making it available for query in very near real time.
- The on-demand scalability allows Chime to scale up when necessary or stay small to keep costs under control.
- Snowflake's flexibility made integration with other tools, such as Tableau, quick and painless.

“What we love most about Snowflake is the JSON ingestion, performance on JSON loads, and the newly enabled queries using SQL.”

— Ethan Erchinger, Director of Operations, Chime

With Snowflake, Chime's ETL process pulls data from 14 different sources, including applications that emit JSON data and other databases, and then pushes the data, without difficulty, into various tables in Snowflake. Snowflake also enables the Chime team to use familiar SQL instead of the other platform options that use complicated programming languages to extract and analyze the data.

Any prospective solution Chime adds to its environment must integrate with various APIs and web-based data sources. With Snowflake, instead of building out the full stack in its environment, Chime takes the data from many sources and sends it to Snowflake. Snowflake helps Chime realize greater JSON performance, thus providing data for faster evolution of personalized banking services to its customers.

THE RESULTS

Chime Personalizes the Customer Experience

Chime's goal is to help their members live healthier financial lives. They do this by eliminating fees and delivering a personalized, mobile-first banking experience that helps members save money. In the background, Chime uses data analytics to personalize all aspects of the mobile application.

For example, one of Chime's personalized mobile features is the free-free ATM finder which helps members locate over 24,000 fee-free ATM locations nearby. When the feature was initially released it had standard zoom across all customers and geographies. However, the data revealed that customers in certain geographies spent considerable time scrolling around, zooming in and out to find an appropriate ATM. For instance, the customers in low

population density areas needed to expand the view to a larger area to find an ATM. Or the opposite occurred if the customer was in a highly populated area such as San Francisco, where members might see too many options and need to shrink the view.

Using Snowflake's data warehousing architecture, Chime was able to analyze patterns in usage data for the mobile fee-free ATM locator. Based on this analysis, Chime enhanced the functionality of the mapping feature so that the map display correlates to the individual member's location. The result is a much more user-friendly experience for locating nearby free-free ATMs.

“The manual activities based on a big 300-column table are now history, which saves tons of time. Snowflake has rid Chime of the restriction of a rigid data modeling world, allowing for a much faster pace of business and far greater efficiencies for our small technology team.”

– Ethan Erchinger, Director of Operations, Chime

LOOKING INTO THE FUTURE

Scalability with a Focus on Member Value

Snowflake enables Chime to align resources with its members' needs and to keep pace with the company's incredible growth. With the click of a button, Chime can scale up its use of warehouse and storage. In addition, the ability to spin up a separate warehouses allows Chime to separate data loading workloads from analytics, eliminating competition for resources.

New doors for data use have opened. Analysts now do more modeling of scenarios to enhance member services. The BI team spends more time analyzing that data and deriving value, and much less time waiting on result sets from various queries. "A lot of platforms have challenges handling an SQL query that is 80 or 90 lines long, when you're joining 6 tables," said Erchinger. "Snowflake handles it very nicely."

Snowflake's ease of use means analysts can effortlessly query the data, and have dashboards readily available. This has removed the need for a dedicated person who used to run numbers and build dashboards for others. Analysts now build out models and seek to understand the data rather than wrangling the data.

"The scalability of the Snowflake model, both in terms of raw performance and ease of integration of use cases of new data, allows us to keep focused on enhancing customer value for the millennials who are our main target," said Erchinger.

ABOUT SNOWFLAKE

Snowflake is the only data warehouse built for the cloud. Snowflake delivers the performance, concurrency and simplicity needed to store and analyze all of an organization's data in one location. Snowflake's technology combines the power of data warehousing, the flexibility of big data platforms and the elasticity of the cloud at a fraction of the cost of traditional solutions. Snowflake: Your data, no limits.

Find out more at [snowflake.net](https://www.snowflake.net).