

HOW PUBLICA IMPROVES CTV MONETIZATION THROUGH THE SNOWFLAKE DATA CLOUD

ADVERTISING TECHNOLOGY



COMPANY Publica
LOCATION Palo Alto, California

SNOWFLAKE WORKLOADS USED



Publica's ad-serving technology enables publishers to deliver targeted ads to Connected TV (CTV) environments and increase their yield from online video advertising. Through a real-time bidding system, the company helps customers fetch the highest possible price for each impression while helping to ensure the content of video ads meets business rules. Publica delivers over 2 billion ads to CTV devices every month.

STORY HIGHLIGHTS:

Improved customer experience

By partnering with Snowflake, Publica gives publishers access to granular insights that help them optimize their CTV yield.

Speed and scalability

Snowflake's compute and storage resources are flexible and elastic, enabling the company to query larger data sets and pull reports much faster.

More accurate forecasting

By increasing granularity and enabling Publica to increase the lookback window, Snowflake helps Publica deliver more accurate forecasting to its publishers.

CHALLENGE:

Providing granular, real-time reporting to customers

Publica has billions of data points, including auction-level data on what inventory each advertiser is buying and at what price, as well as first- and third-party data used to build audience segments such as "sports fans" and "high income households." The company wanted to leverage this data in a real-time dashboard with key metrics, such as revenue, impressions, and cost per thousand impressions (CPM), to help publishers understand how their inventory was being monetized.

Publica had been using SQL Server as its data warehouse, but this approach had significant constraints. Publica was limited in the size of the data sets it could query as well as the number of metrics it could present to client users. Due to the high latency of this system, it wasn't possible to keep the dashboard updated in real time or to provide granular insights.

“Without Snowflake's scalability, it would be virtually impossible to provide the necessary level of granularity to Connected TV publishers.”

—BEN ANTIER, Co-Founder, Publica

5x

Increase in query speed, down from 15 seconds to 3 seconds

200 billion

Number of rows in largest aggregate tables, up from 400 million

32 and 42

Number of metrics and dimensions accessible for real-time monetization and performance reporting

SOLUTION:

Implementing Snowflake to provide a real-time view of ad inventory

Migrating to Snowflake took only a month. From there, Publica built a new UI for external users that provides access to real-time analytics. Users can see live data on the prices ads are fetching in the auction (filtered by audience segment, channel, or inventory type), advertiser spend and performance, and much more. This enables the Ad Operations teams to detect fraudulent ad activity and make optimizations that improve yield, such as changing floor price rules and business rules that dictate how many ads can be served in a given time frame.

Customers have benefited from a noticeably improved user experience. According to Publica's Co-Founder, Ben Antier, "Loading up the dashboard is faster, and they love that."

By having a more holistic view of audiences through the ability to surface all events associated with each device ID, Publica has also improved its forecasting capabilities. It built a machine learning (ML) model on top of Snowflake that can provide accurate estimates of how many unique viewers from each audience segment will watch a piece of content in the next 30 days, how many available ad impressions that represents, and for what price those impressions should be sold. This enables publishers to set business rules that increase their yield from programmatic CTV sales. It also arms them with valuable insights when selling CTV inventory directly to media agencies.

“The ability to build machine learning models on top of Snowflake is one of the most exciting parts of our roadmap. It's going to help us do more and smarter things for our customers.”

—BEN ANTIER, Co-Founder, Publica

RESULTS:

Faster, more-granular reporting for customers

In the UI built on Snowflake, Ad Operations teams and senior executives can access real-time reporting for monetization and performance across 32 metrics and 42 dimensions. They can filter reports by advertising domain, ZIP code, content ID, and many other variables. Publica can also quickly fulfill requests to add dimensions, such as the category of a movie and whether it's livestream or video on demand, without having to be concerned about whether Snowflake can handle it.

Faster queries

By implementing Snowflake, which can scale up computing resources as needed, Publica's engineers have the ability to run ad hoc queries without slowing down other workloads. This has increased their productivity by an estimated 5x.

FUTURE:

Building new machine learning models on top of Snowflake

Publica is planning to build models on top of Snowflake to help it recognize video content and ensure that only high-quality, brand-safe ads that meet advertiser requirements are delivered. Publica aims to also avoid rejecting ads unnecessarily by identifying the advertiser for each piece of content. This applies to cases where an ad is rejected from the auction due to a lack of signal about its origins. (This rejection currently happens automatically to avoid delivering the same ad twice or delivering ads from competing brands back to back.)

The scale of this undertaking, which encompasses 2 billion ads served each month, will be achievable because Snowflake's compute resources and storage are flexible and instantly elastic.

ABOUT SNOWFLAKE

Snowflake delivers the Data Cloud—a global network where thousands of organizations mobilize data with near-unlimited scale, concurrency, and performance. Inside the Data Cloud, organizations unite their siloed data, easily discover and securely share governed data, and execute diverse analytic workloads. Wherever data or users live, Snowflake delivers a single and seamless experience across multiple public clouds. Join Snowflake customers, partners, and data providers already taking their businesses to new frontiers in the Data Cloud. [snowflake.com](https://www.snowflake.com)