



CASE STUDY

Achieving Faster Marketing Analytics

The Action Network



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Background

Action Network provides SaaS solutions that help nonprofit agencies, such as grassroots organizations, international NGOs, or labor federations raise money for campaigns, collect RSVPs for events, sell tickets, create online surveys, ask activists to email their elected officials, and more. These solutions enable organizations to do mass mailings with industry-leading reliability, perform complex email targeting, complete A/B testing, and obtain full statistics to analyze success. The company relies on HVR to instantly migrate data from its MySQL on Amazon RDS production database to an Amazon Web Services (AWS) Redshift data warehouse. With HVR, Action Network now enables customers to create targeted email lists and analyze the results from their campaigns in near-real-time, rather than in minutes or hours.



Challenge

Action Network's solutions rely on a robust MySQL production database that continually gathers information about potential donors and activists for thousands of nonprofit organization customers. The database stores data, such as name and contact information, which emails each contact received, as well as whether each contact opened an email, signed a petition, donated, and much more.

The company's email targeting application and analytics solution, called SQL Mirror, take advantage of this data. For the email targeting solution, the company had been replicating contact information to the search and analytics engine that customers used to run queries to create targeted

CASE STUDY SNAPSHOT

Customer:

Action Network

Challenge:

Reduce time to create targeted email lists and enable customers to analyze their email campaign performance

Solution:

The company uses HVR to move data instantly from its MySQL OLTP system to the AWS Redshift data warehouse it uses for querying and analytics

Results:

- 80% reduction in time required to create targeted email lists
- Customers received real-time data on their email campaigns vs the previous 6-8 hours

Databases:

- MySQL RDS
- AWS Redshift

Use Case:

- Data Warehousing

email lists. These queries typically took five to ten minutes. Action Network wanted to reduce the search time.

For the SQL Mirror analytics application, Action Network initially collected all email campaign performance information in the central, multi-tenant production database and then ran a script that pulled out the data for each customer into their own MySQL database instance. Customers could then analyze the data with their own dashboards, run ad hoc queries, or dump the data into a data warehouse where it could be combined with other data sources. Because Action Network had to parse out the data for individual customers from many millions of rows of data, the scripts could take six to eight hours to run. Customers were unable to access up-to-the-minute data about their campaigns. Action Network wanted to allow customers to obtain their data in real time.

After testing various solutions, Action Network determined that it could solve both these issues by implementing an AWS Redshift data warehouse. But it needed automated, real-time replication between the MySQL RDS production database and Amazon Redshift to fully realize this solution.

Solution

As Action Network performed its extensive search and evaluation process, it found that most of its options were batch extract, transform and load (ETL) solutions. “We selected HVR because it allowed us to perform real-time replication without putting any load on the source database,” says Jason Rosenbaum, Director of Technology for Action Network. The Change Data Capture (CDC) functionality captures changes from MySQL instantly and replicates them in real-time to Amazon Redshift, which performs the queries necessary to create targeted email lists and parses out customer-specific data for SQL Mirror analytics instantly.

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Results

By using HVR to replicate data in real-time and using Redshift, Action Network now provides its customers with targeted lists in just two-to-three minutes.

Real-Time Analytics

Customers using SQL Mirror also get the data they need to analyze the results of their campaigns minutes after it is collected in the production system. “Because our customers get real-time data, rather than having to wait six to eight hours, their analytics are now much more accurate,” says Rosenbaum.

Simplified Architecture

The overall architecture has been simplified as well. “We no longer have to run the scripts to transfer data from MySQL to the search engine, so our entire solution is simpler and requires less developer hours,” says Rosenbaum.