

Domo doubles performance capacity and reduces downtime without increasing costs by migrating to Amazon Aurora



Case Study

Executive Summary

When Domo, a data platform company, migrated over 95% of their MySQL workloads from on-premises and cloud servers to Amazon Aurora, they doubled performance capacity and reduced their downtime without increasing their costs.

The Challenge

Data tables that support each customer portal get queried very frequently to maintain customer state and to keep up with customer changes. Ensuring that these queries run fast is a necessity to maintain the performance of the metadata engine that Domo uses to track the data customers upload to the system. As it was, the existing system did not offer the disk speed (IOPS) needed to run the large tables behind the customer portals. This increased the risk of degraded system performance and poor customer experience. There were also times when engineers had to address up to 15 daily server alerts as well as any system changes or failover events which typically resulted in 20-40 minutes database downtime.

The Solution

Domo migrated 95% of their MySQL on-premises and cloud databases to Amazon Aurora. They reduced the number of servers running from three to two per cluster and increased their overall capacity by splitting out queries between read and write nodes. By working closely with AWS engineers, they were able to get the features they needed and access the IOPs they required to support querying large customer portal tables. This freed their engineers to focus on finding new ways to optimize compute power through code changes.

“With AWS it feels like I have a team of engineers waiting to help me. I couldn’t get that value by hiring one more person; I would have to hire ten. ”

– Bret Bills
Director of Engineering at Domo, Inc.

About Domo

Domo is the quickest, easiest, and most secure way to make data work across the business. With more than 1,000 native connectors, Domo makes it easy to connect and normalize data from any source, get real-time insights powered by data science into the hands of every decision maker, and make custom low code/no code apps for teams, customers and partners.

- √ Achieved **twice the IOPs** for the same cost
- √ Reduced database downtime from **20-40 minutes to 2 minutes**
- √ Reduced server alerts from **3-15 daily, to less than 2 per week**
- √ Migrated **30,000 customers in 4.5 hours** without incident
- √ Dropped **1 server and decreased server traffic** by half

“My favorite thing about Domo is the ability to deliver real-time information on the fly. It’s created an atmosphere of transparency here in terms of how we deliver information to our business users. ”

– JR Howden
Digital Analytics Lead at Telus



the future is friendly®

“Aurora made my life easier. I was dealing with three possible system degradation alerts each night after hours, up to 15 or 20 some nights, that all had to be investigated. Now I am typically alerted once or twice a week.”

Results and Benefits

By migrating to Amazon Aurora, Domo was able to achieve reliable disk speed and performance with minimal downtime.

Eliminated performance constraints with twice the IOPs for the same cost

Each customer portal consists of a large number of tables which led to server sprawl and the threat of degraded query performance as their computer footprint grew. Domo engineers were spending a considerable amount of time trying to stay ahead of this threat.

By moving to Amazon Aurora, Domo increased their server density at a 7:1 workload ratio compared to their previous solution and decommissioned 140 cloud servers. Amazon Aurora provides the required IOPs, effectively delivering twice the performance at the same cost. “I had a server that used to fail over to our hot spare often because it got used so much,” Bret says, “that server no longer fails.”

Improved developers' efficiency and innovation through AWS services

Domo ran approximately 1,000 MySQL servers that were unnecessarily costly and demanded their four engineers to spend a disproportionate amount of time maintaining and managing them. The team dealt with—on average 2-3 but as high as 15-20—service alerts every night after hours which stretched them too thin.

By migrating most of these servers to Amazon Aurora, the DBAs at Domo are now able to focus on performance tuning of the system rather than just maintain MySQL servers. Similarly, the AWS environment avails Domo developers to a rich ecosystem of services that they can leverage for building and enhancing their products.

Learn more

[Amazon Aurora](#) is a MySQL and PostgreSQL-compatible relational database built for the cloud, that combines the performance and availability of traditional enterprise databases with the simplicity and cost-effectiveness of open source databases. Amazon Aurora is up to five times faster than standard MySQL databases and three times faster than standard PostgreSQL databases. It provides the security, availability, and reliability of commercial databases at 1/10th the cost.