CASE STUDY

publica.la

publica.la Speeds Search 70X, Processes Millions of Rows per Second, Lowers TCO, and Grows its Business with SingleStore

70x

improvement in search

120K

queries per minute for real-time performance

Millions/:01

publica.la is now processing millions of rows per second

USD1K

Saving $1,000+/mo. DB cost + massive opportunity cost

35%

dashboard acceleration

> "SingleStore will seriously decrease our infrastructure complexity, allowing us to move faster and with more confidence. This all started with search, but now it's far bigger than that. By implementing SingleStore, we get to impact everything, including search."

Franco Gilio, Co-Founder and CTO, publica.la

Challenges/ Goals

publica.la's goal is to democratize and decentralize content commerce, providing a one-stop solution for publishers and authors to connect with their audiences, but major challenges stood in its way. publica.la customers were not getting the quality and speed of search results they needed, even though the company was putting a great deal of effort into this functionality. "Our original database solution was not scaling, it was failing. In some cases, we couldn't provide search results, and the quality of the results was not very good," said Franco Gilio Co-Founder and CTO, publica.la.

Inability to scale its search capabilities was the primary reason publica.la started looking for a new database solution, but its infrastructure complexity also posed an issue. "We had difficulty managing all the different tools and software we were using; MySQL, PostgreSQL, and Redis. We were going to add Elasticsearch to solve the search issue, but it wasn't optimal," said Gilio.

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Technology Requirements

publica.la needed to be able to scale search, as it was experiencing growth by thousands of publications per month. Some new customers have up to 100,000 titles to add to their content library, consisting of millions of pages. Gilio and the team tried to use indexes in Managed PostgreSQL, as MySQL did not support full-text search at the time, but it still did not scale as well as they wanted.

"It was a solution we knew would last about two years, then we would need to migrate to a more mature solution," said Gilio. "If we only cared about search, Elasticsearch may have been the right solution. But the key for us is to be able to manage all of our data infrastructure in one data platform, which was not something Elasticsearch would facilitate."

Publica.la also wanted to reduce infrastructure complexity so it could move faster and with more confidence. The original solution was creating friction and lost time inside the engineering team, and this needed to be addressed.

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SingleStore

CASE STUDY

publica.la

Why SingleStore?

publica.la's original data environment was a textbook example of database sprawl. It included:

- AWS RDS with MySQL 8
- Three different RDS databases
- PostgreSQL 14
- Redis

Adding Elasticsearch to the mix would further increase the complexity of the infrastructure. Other search solutions under consideration included Algolia, which the team thought was fantastic, but too expensive; or having Elastic.co host the cluster. AWS's version of Elasticsearch, Amazon OpenSearch Service, as well as Amazon Aurora and Aurora Serverless, also came up in discussions — but that was also when publica.la learned about SingleStore.

"Some of our most important revenue-generating customers started to grow faster than we were able to manage with PostgreSQL. We spoke a lot with Jack Ellis of Fathom Analytics, who is very outspoken about what he does and doesn't like in databases. He basically said, "You should just try SingleStore," said Gilio. SingleStore is the modern database for data-intensive applications, unifying transactions, analytics, storage, and data models. This solution enables organizations to drive ultra-fast analytics and effortlessly build and scale modern apps with just one database.

"Originally, our aim was just to scale full-text search. But when we learned that SingleStore was an option to solve that issue, we also saw that we would be able to manage costs in a more predictable way. SingleStore will seriously decrease our infrastructure complexity, allowing us to move faster and with more confidence. This all started with search, but now it's far bigger than that," said Gilio.

Outcomes

70X Faster Search Results + 35% Dashboard Acceleration

"We wanted to benchmark search and the analytics database because we thought that those were going to be the ones that are going to see the most impact. We took special care to compare SingleStore against a similarly priced instance in AWS, just to make it a little bit fairer," said Gilio.

SingleStore was so fast publica.la didn't even need to run its usual benchmarks. Search benchmarks were up to 70X faster than the previous solution, and the dashboards were 35% faster. These performance improvements led to a faster and better experience for users across all areas:

- Search
- Storefronts
- Dashboards
- Exports
- Other functions

Real-Time Performance Processing Enables 120K Queries Per Minute

"About 98% of what we do with the database is real-time, so low latency is extremely important for us," said Gilio. By deploying SingleStore, publica.la is delivering real-time performance on nearly all queries, processing millions of rows and 2,000+ queries per second.

Saving $1,000/Month in DB Cost; Opportunity Cost: Incalculable

Depending on customer and user activity, publica.la was experiencing major cost spikes due to associated services, such as the AWS Network Address Translation (NAT) gateway. By migrating to SingleStore, publica.la was able to gain better cost predictability. Previously, using MySQL, it had to push data to Amazon S3 daily to support cost-effective operations. With SingleStore, publica.la will soon eliminate this process and minimize data movement.

SingleStore