

HIT LABS

CUSTOMER SUCCESS STORY

Hit Labs built an easy-to-use app called Bubble Group Messenger that allows people to video and text chat in real-time with a group of friends, colleagues or family members.

With the rapidly growing popularity of their app, Hit Labs switched from Amazon Aurora to self-managing ClustrixDB to scale their write-heavy workload so their development team could focus on new features and the user experience.

Preparing for Rapid Social Adoption

Hit Labs was approaching a crossroads with their social app, Bubble Group Messenger. Their app, which makes it possible for a group of friends, family members or co-workers to video and text chat in real-time – as if at a house party or in a conference room – was gaining traction. Celebrities, such as Steph Curry of the Golden State Warriors, were signing on to “crash” groups at certain times upon invitation. Hit Labs had to make a decision to either hire a DBA team to build out a database infrastructure that could support their rapid user growth, or “hire” an existing technology. Hit Labs decided ClustrixDB would get them to market faster at a lower total cost of ownership (TCO).

Heavy Write Load

The Hit Labs Bubble app creates a very high ratio of database writes to reads. At any given time, multiple microsecond events are happening. For each group with simultaneous connections, every message sent creates writes for every person who received the message such as their location, the fact they received the message, their history, and other user information. So one message to a group of 10 can create 10 writes, or every 100 creates 1000, and multiple people in a group can be sending things concurrently, such as messages, gifs, and videos. If one user is logged onto multiple devices, it syncs in real-time. At the same time, new users are signing up and onboarding. Daily users increased 20 times over an eight-month period.

To Shard or Not To Shard

As a social app, instantaneous response is crucial, and Hit Labs knew their infrastructure had to stay ahead of demand, so they could continue delivering a satisfying user experience. In addition, they had innovative features they still wanted to add to the app. For database scalability, they evaluated multiple options.

Hit Labs originally built their app on Amazon’s Aurora but discovered scaling would be a problem. They conducted a series of tests with Aurora and quickly ran into scaling limits, making it clear to them that they would have to pay for more servers to support their write load. They investigated sharding their dataset for Aurora and scoped that to be a six to eight-month project, during which time they would not be able to add new features. Additionally, they would need a team to maintain the sharding environment and continually update it to accommodate new features.

Hit Labs investigated VoltDB, as well as creating multiple MySQL write masters with unique IDs, but both looked too complex.

ClustrixDB Saved Six to Eight Months of Development Time with a Lower Total Cost of Ownership

With ClustrixDB, Hit Labs realized they could save six to eight months of development time for the cost of hiring a DBA. Because ClustrixDB is a distributed database designed to handle high-volume workloads with self-managing administration, they could scale-out on-demand with minimal or no DBA intervention.

“My big question was how does ClustrixDB compare to hiring a DBA. The cost was comparable, but we could get our new features to market faster without the associated opportunity costs of postponing the features. There are always risks when hiring a new person. We had a top-notch team that worked well together, why risk bringing someone else in? In this case, I much prefer to hire a technology than a person.”

- Zach Mangum, CEO and Co-founder, Hit Labs

The Multiple Benefits of ClustrixDB

Hit Labs is currently in production with ClustrixDB on AWS. According to TJ Hunter, a Hit Labs co-founder who functions as their CTO, there are several reasons why ClustrixDB was the right choice:

- **MySQL Drop-In Replacement** – We wrote Bubble using MySQL syntax with a lot of MySQL-specific features. There were times they thought “this won’t work on Clustrix”, but it always did. It’s a solid, polished, piece of software”.
- **Fast Time-to-Market** – “Migrating from MySQL/Aurora to Clustrix was a very smooth process. Only a few minutes of configuration changes and minor code changes in our application were required to get up and running with no issues. After that, a few days’ worth of data integrity and performance testing saved us potentially six to eight months’ worth of the full-time developer work necessary to implement application-level sharding of our data.”
- **Self-managing Operations** – “ClustrixDB just runs, it’s not needy or noisy – it just does its thing. I can trust it to do the work for scaling and handling our high ratio of writes to reads. I don’t even have to worry about what our AWS configuration is. I know if we need to scale, we can just add a node and ClustrixDB will do the rest.”
- **Simplified Application Code** – “We were even able to simplify the application code for handling emoji’s since Clustrix handles 8-byte Unicode out of the box. We were able to drop some workarounds we had to develop to extend MySQL’s 4-byte Unicode character support.”
- **Quality Support and Documentation** – “Clustrix has great documentation and was very easy to setup and configure and could easily be managed by our existing team. Clustrix technical support has been amazingly helpful, knowledgeable, friendly and fast at answering even the smallest of requests.”
- **Freedom to Innovate** – “Before I was always stressing about load, and application charting, and worrying about the future. Now I can focus on applications that will enhance the individual user experience.”

The Hit Labs Bubble Group Messaging App is available on Google Play and the Apple App Store. [Trybubble.co/](https://trybubble.co/)

Clustrix

Clustrix delivers the world’s leading scale-out SQL database perfectly suited for high-value, high-performance OLTP applications that run on-premise or in the cloud. ClustrixDB is a drop-in MySQL replacement and is known for its on-demand scalability, high availability, resiliency, ACID compliance, and shared-nothing architecture. ClustrixDB delivers more than twenty-five trillion transactions per month for customers including AOL, Nielsen, Match, MakeMyTrip, Photobox, Rakuten, and Symantec. ClustrixDB is available in software that runs on commodity hardware and on any cloud. Clustrix is headquartered in San Francisco.

To learn more about Clustrix, visit us at www.clustrix.com

