Analyse Deploys Real-Time Dashboards from SingleStore to Help Minecraft Admins Score with 700,000+ Players Worldwide

700K+
Supporting 700,000+ players worldwide

100+ Million
rows of data within six months of launch

200
rows/second data ingestion for real-time dashboards

<100ms
Latency with complex queries with three to five table joins

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Charlie Joseph
Chief Executive Officer, Analyse

Launched in February 2022, Analyse is the go-to Minecraft analytics solution. The game analytics software-as-a-service (SaaS) solution provides Minecraft server administrators detailed insights into their communities so they can make the best decisions to grow and thrive. With Analyse you can discover your players, understand your growth, view per-player analytics, fetch any player or PlaceholderAPI statistics and show them anywhere you'd like. Analyse is growing rapidly, currently supporting hundreds of servers tracking the activity of more than 700,000 unique players worldwide.

London-based programmer and entrepreneur Charlie Joseph [Twitter] [LinkedIn] is Chief Executive Officer and Developer of Analyse. His long history of running Minecraft servers gave him a first-hand understanding of how hard it is to get the data needed to help these player communities thrive. "In the beginning, I had no idea where players came from or how long they played the game. I tried several plugins to get these insights, but each plugin had issues," he said.

The plugins available at the time:

- Required opening ports, which put servers at risk of potential security breaches
- Were resource-intensive, leading to laggy servers and a poor player experience
- Were hard to use with confusing installation processes
- Tracked features that weren't useful

Since these existing options fell short, Joseph founded Analyse to tackle the challenges that Minecraft server administrators face in understanding and growing their communities.

Challenges/Goals

Joseph previously used MariaDB, which handled 100 million rows of data but required ongoing maintenance with behind-the-scenes caching to ensure optimal speeds. "The issues with the previous solution I worked with meant we were dealing with partial downtime on a regular basis. I was also working six days a week, and issues couldn't be resolved until I was home." The primary revenue source for Analyse was backed by on-site advertising, which meant any downtime resulted in monetary loss.

He also previously used MySQL: "I've had a project involving close to 100 million rows of data using MySQL, and it involved so much stress to maintain with lots of caching involved."

SingleStore

"Our main goal is for our SaaS solution to be easy to deploy with little to no maintenance, giving server administrators access to actionable data for their players' success within minutes," he said. His development goals for Analyse included:

- A lightweight design
- An easy-to-use solution with simple installation
- A solution that provides tried and tested analytics
- No requirement for server administrators to open up ports

As he started working on the SaaS solution, Joseph knew he needed a robust database that would get Analyse started on the right foundation and be able to rapidly scale.

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Technology Requirements

"For Analyse I knew we needed a solution that wouldn't require weekly maintenance or server-side caching," said Joseph. "The goal was to spend all available time on building the core functionality of the product without dealing with the headache of data migrations later on." The technology requirements for a database to support Analyse included:

- Affordability for a new startup from day one
- Ultra-fast data ingest to support real-time analytic dashboards
- The use of a familiar query language, such as MySQL, rather than a product-specific language
- Support for rapid scalability and high user concurrency

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SingleStore

Why SingleStore

"I chose SingleStoreDB On-Premises because I knew I'd be dealing with a high volume of data from launch, and didn't want the headache of migrating this data in the future," said Joseph. "I wanted to choose something solid from launch, so I could focus more time on my core application instead."

SingleStore stood out to him, as the technology is used by large, enterprise companies, and offered a self-managed solution that was well suited for the needs of his day-one startup.

"My favorite thing about SingleStore is the self-managed option," he said. "Without it, I wouldn't have been able to afford cloud hosting, as Analyse is a startup where saving every dollar is crucial. Once our SaaS solution generates enough revenue, we'll have the opportunity to move to SingleStoreDB Cloud."

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Analyse considered other solutions, but they all required learning a product-specific query language. That wasn't viable, as it wouldn't work with Laravel out of the box.

"Personally, SingleStore's biggest strength is its MySQL connector, as it allows me to continue working on the application without the need to learn a new query language. This has meant it's been fairly straightforward to implement in Analyse, and combined with the speed that SingleStore has, I haven't had to fear storing high volumes of data. We can super-charge existing queries without needing to do adaptation to the application. Plus we can utilize specific features like TIME_BUCKETs with Laravel, as these are only small changes," he said.

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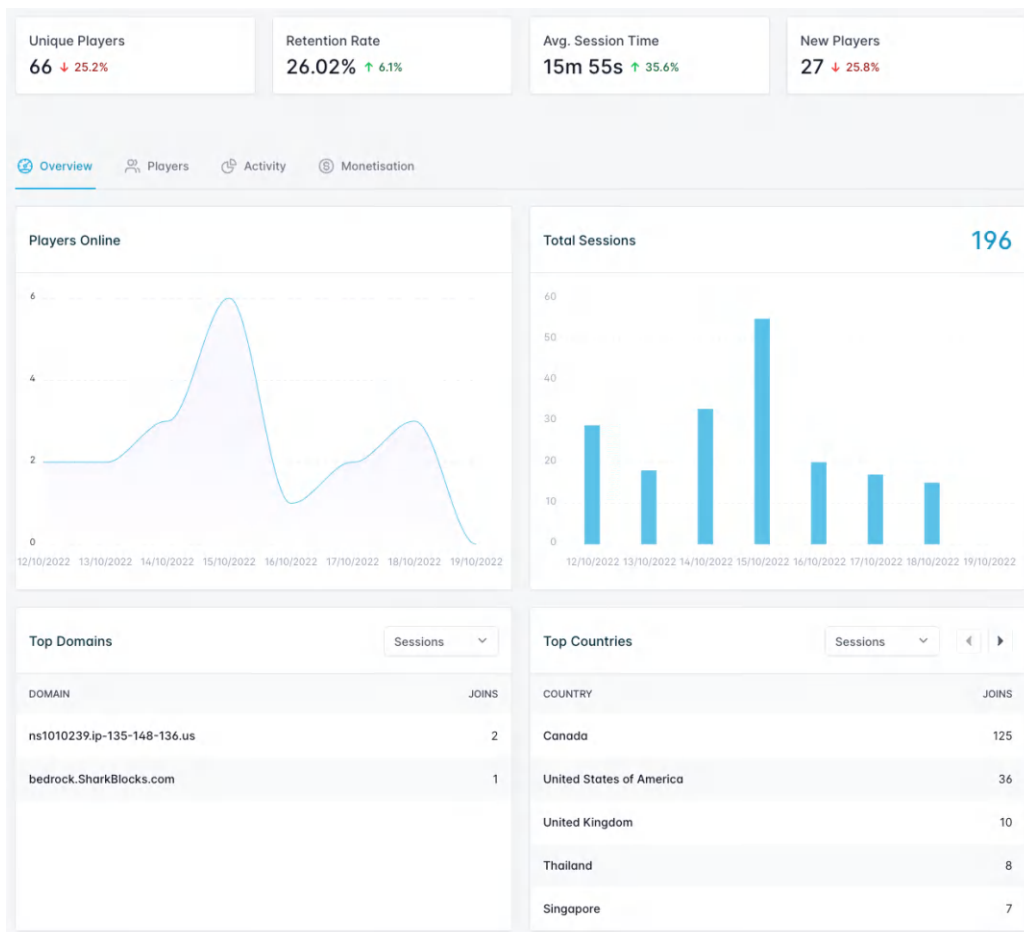
SingleStore

Solution

"SingleStore has been hands-down the easiest database solution I have tried. The documentation was straight forward and it was effortless to install," said Joseph.

Analyse deployed SingleStoreDB Self-Managed, as its cost efficiency fit their needs. Even the self-managed SingleStore solution required little to no maintenance from day one, and brought the fast analytics dashboard performance Analyse needed.

Analyse runs on two SingleStore clusters with Debian on bare metal and visualizes the Minecraft server data using the Laravel framework with Vue.js. By using Laravel and Vue.js together, the team is able to be extremely efficient in delivering new features on the platform.

"I'm a huge fan of the Laravel framework as it lets me focus on my core application, rather than authentication, email notifications, etc. In addition to this, I am a huge fan of Vue.js as it is straightforward to learn, but provides a lot of flexibility with components," he added.

While Analyse isn't currently using SingleStore platform features, the CEO plans to switch to the Data API for INSERTs soon.

Analyse is the world's go-to Minecraft analytics solution

Analyse

Outcomes

Analyse has scaled its technology and its business with SingleStore, and Joseph attributes this as much to people as technology. "SingleStore is a company fueled by an unmatched level of drive and passion that couldn't be found anywhere else in the database field," he said. "I've gotten to see firsthand how amazing the SingleStore community is and how helpful the entire staff is. The staff was willing to put their own time and effort into answering my questions and guiding me — without expecting any form of financial gain or incentive."

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Scaled to 100+ Million Rows of Data Supporting 700,000+ Minecraft Players in Six Months

Analyse launched in February 2022, and within six months, it scaled to 100+ million rows and 2GB of data supporting more than 700,000 Minecraft players. The typical data ingestion rate is 200 rows/second. SingleStoreDB Self-Managed scales alongside Analyse's rapid growth, supporting the platform's requirements from day one and far into the future.

"We only ever need to worry about expanding our node volume with SingleStore, rather than being concerned with moving to a completely different solution," said Joseph.

Supports Hundreds of Concurrent Users with Real-time Dashboards

"Analyse users now have really fast and snappy dashboards, which has made them very happy and satisfied with our solution," he said. "SingleStore has been hugely beneficial to my application and our goals."

Analyse delivers real-time insights on community performance metrics to Minecraft server administrators, with SingleStore returning query responses in sub-200 milliseconds (ms) on complex queries featuring three to five table joins.

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SingleStore Enables Analyse to Focus on its Core Application — and Business

"SingleStore is hands down the go-to choice if you want an out-the-box solution without fearing maintainability. I no longer have to cache results with Analyse, so my customers get a live dashboard and I get to focus on building features, not infrastructure," said Joseph.

"Currently, we only provide community performance metrics. We would love to expand into monetary metrics," he continued. "That would allow us to provide better insights to the server administrators so they can fine tune gameplay to better convert their player-base who aren't yet subscribed."

Hear how Charlie Joseph got his start in tech, advice to developers navigating a crowded market, and more in this **Guest Engineer Showcase!**

SingleStore is helping companies compete and win across every vertical. **Learn More >**

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