

# Fergus Optimizes Customer-Facing Dashboard to Improve User Experience

Fergus turned to Pythian to optimize the performance of their MySQL on AWS databases. Pythian helped Fergus optimize the loading speed of their customer-facing dashboard by 152%.

Fergus is a smart management software for trades businesses. The cloud platform gives business owners greater control over their operations with quoting, invoicing, and scheduling functionality. Fergus makes job management easier with their all-in-one solution.

Trades businesses worldwide trust Fergus as the operational backbone of their companies. With Fergus taking care of their day-to-day, tradies (e.g., plumbers, electricians, and other service providers) can focus on what truly matters—their customers! Fergus gives business owners and managers the time and insight they need for their businesses to grow and succeed.

## The challenge

Fergus inherited an application that helped small business owners to quote, invoice, and schedule jobs. Running MySQL 8.0 on Amazon Web Services (AWS) Relational Database Service (RDS), the application experienced several database performance issues, with the most significant issue on the customer-facing dashboard.

To maintain Fergus' long-delivered promise of providing an efficient tool for trades businesses, they recognized the immediate need to improve the load time of their customer dashboard. Fergus prides themselves on empowering small businesses with more clarity and control and knew they required additional database support to improve their dashboard load speed performance.

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**“Fergus’ tool is built to help business owners quickly get quoting, invoicing, and scheduling done. Tradies don’t have time to sit and wait on software; that’s why it was so crucial for us to optimize our load times.”**

– Katrina Clokie, Chief Technology Officer, Fergus



## Fergus

### Industry

Information Technology

### Technologies

- MySQL
- AWS RDS
- AWS Cloud Watch

### Overview

Fergus is a software platform designed to give trades business owners more control over how they run their businesses. To improve the user experience of their customer-facing dashboards, Fergus sought to improve the performance of their MySQL databases on Amazon Web Services (AWS).

With Fergus' development teams focused on delivering new features and enhancements, they needed an experienced partner to identify optimizations, test and implement them, and share insights with their team.

Fergus' in-house teams needed to focus on software development and sought technical expertise to identify the source of their MySQL performance issues. Upon seeking recommendations from Fergus' AWS team, they referred Pythian and our global team of database experts.

## The solution

Pythian's senior database engineers dove right in and met with Fergus' internal team. To identify the root cause of Fergus' performance issues, our teams conducted a Database Health Check.

We discovered that Fergus' database performance issues stemmed from adding recommended indexes and a series of query rewrites. After further analysis, we found that these root configurations caused the extended loading time of price book data—the key issue directly impacting Fergus' customers.

After identifying the root source of Fergus' database issues, Pythian worked directly with the team at Fergus to implement a series of database performance optimizations.

Fergus used Sentry, a tool for identifying the slower areas of SQL. Our senior database engineers met with the customer twice weekly to review and recommend indexes or query rewrites. After successfully running fixes on an internal test environment, we applied them to Fergus' production environment.

Our database experts provided insight into our technical recommendations, further empowering the customer's technical teams. We made additional comments in Fergus' task tool and provided context behind our performance suggestions.

Our Database Performance Service Delivery included:

- Configuration review of AWS RDS instances, including parameter group settings and instance class
- Review of slow queries and recommendations for improvement, including indexing, query rewrites, and schema changes
- Review of tables in need of archiving with a recommendation for an archival process
- Working with Fergus to test and implement performance optimizations

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**“Pythian has a collaborative approach. They really felt like a partner. They met with us twice a week, working with our teams to test recommended indexes and query rewrites before our development team moved these over to production.”**

– Katrina Clokie, Chief Technology Officer, Fergus

## Business Need

The customer's development team experienced database performance challenges with MySQL 8.0 on AWS Relational Database Service (RDS). These issues impacted Fergus' customers. The load time of their customer-facing dashboard began to slow down.

Fergus' tool is built to help their customers be more efficient. This is why it was a priority for Fergus to immediately resolve their database performance issue and increase their dashboard load speed. With Fergus' internal teams concentrating on software development, they turned to Pythian upon recommendation from their AWS team.

## Solution

Pythian's database experts teamed up with Fergus' in-house team to pinpoint the root cause of the performance issues they were experiencing. Through our Database Health Check, our experts determined the issue causing the slow load speed - it was caused by newly added recommended indexes and query rewrites. Our database experts conducted a full review of Fergus' databases, covering everything from configuration assessments, slow query enhancements, table archiving suggestions, and implemented performance optimizations.

After testing the proposed solutions in Fergus' controlled environment, we worked with Fergus' teams to apply them to the production environment. To empower the customer's technical teams, Pythian provided insight into our technical recommendations as they were being applied to the test environment. Pythian added comments in Fergus' task tool with additional explanations and context behind the performance issues and fixes.

## Key results

Fergus' customer dashboard now loads significantly faster—a 152% improvement.

The optimized dashboard makes it easier for customers to review their active jobs, schedule work, and submit invoices.

## The business outcome

By partnering with Pythian, Fergus identified the root cause of their database performance issues. Pythian's guidance helped Fergus' internal teams expedite their solutioning process, implementing performance optimizations quicker to improve their customer's experience.

After working with Pythian, Fergus' technical team is able to optimize their databases using MySQL 8.0 on AWS RDS. With Pythian as a technical partner and resource, Fergus' teams can focus on delighting their customers with new platform features and enhancements.

**“Our primary focus is on continuously improving the customer experience, and we've been full steam ahead on optimizing their experience through our work with Pythian. The performance improvements we have seen through implementing just a handful of Pythian's suggestions have been phenomenal.**

**Our loading speed was improved by 152%!**

**That's a significant improvement in the performance of our Fergus application as a direct result of our partnership with Pythian; we couldn't be happier. Thank you for your wisdom and how your teams continue collaborating with our New Zealand-based platform team.**

**The teams at Pythian are stars; we highly recommend partnering with them for your database needs.”**

- Katrina Clokie, Chief Technology Officer, Fergus

## Result/Key Outcomes

Fergus successfully resolved their database performance problems and improved the loading speed on their customer dashboard. The partnership with Pythian, not only boosted the customer experience with Fergus' software and applications, but also strengthened the confidence of Fergus' technical team in managing database optimizations for MySQL 8.0 on AWS RDS. With Pythian's support, Fergus can now focus on improving its platform and delivering outstanding customer experiences.

## About Pythian

Founded in 1997, Pythian is a data and analytics services company that helps organizations transform how they compete and win by helping them turn data into valuable insights, predictions, and products. From cloud automation to machine learning, Pythian designs, implements, and supports customized solutions to the toughest data challenges.

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Pythian

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