

# Pythian's Proactive PostgreSQL Support Sets Gaming Platform up for Sustainable Scalability

Ruby Play Network's hypergrowth could have impacted their developer and player experiences. The company partnered with Pythian to proactively optimize their AWS Aurora PostgreSQL performance.

Ruby Play Network is a rapidly growing crypto and gaming development studio with offices in Christchurch and Westport, New Zealand. Its blockchain-powered gaming platform, Ruby Rewards, is a mutually beneficial environment for mobile gamers and operators: Gamers can acquire digital Play-to-Earn assets on the blockchain while developers can drive more engagement and revenue. Gamers are rewarded by playing games on the Ruby Play Network, earning or buying digital assets, and discovering new developers—unlocking value throughout the gaming ecosystem.

With the swift expansion of Ruby Play Network, the data volumes in its production databases surged. To tackle issues related to performance, availability, and security, the network temporarily archived older database table rows.

## The challenge

Ruby Play Network had growing concerns about their database's performance, availability, and security. Over 10 million rows were added to their tables each month—with this number projected to grow considerably. The potential for extended downtime, maintenance issues, and security breaches threatened to disrupt the entire ecosystem. Ultimately, these issues could potentially reduce player engagement, decrease developer revenues, and diminish trust in the platform.

In response to the surge in data volume, Ruby Play Network's tech teams initiated a temporary solution of manually archiving old database rows. While proactive data archiving addressed some performance issues, the network's rapid growth called for a more permanent solution.



## Industry

Gaming Software Information Technology

## Location

Christchurch and Westport, New Zealand

## Technologies

- Amazon Aurora Serverless V2
- PostgreSQL

## Overview

Ruby Play Network is a rapidly growing crypto and gaming development studio. Gamers are rewarded by playing games on the Ruby Play Network, earning or buying digital assets, and discovering new developers—unlocking value throughout the gaming ecosystem.

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**“Our number one priority at Ruby Play Network is the performance of our app for developers and players, especially as we are scaling and growing our player base.**

**The rapid growth we saw was a sign of success. Success signals a need for scalability. Feature development requires more data being added to our databases, this would directly affect the performance of the app. We did not want to be reactive. We wanted to be proactive—ensuring a seamless developer and player experience.”**

– Dylan Johnson, Head of Technology, Ruby Play Network

Ruby Play Network's technical teams' pivot of focus to database scalability, alongside the businesses' rapid growth, created development bottlenecks. Ruby Play's CTO, Gwyn Edwards, recognized the need for a more proactive approach to managing the escalating data volumes. He knew he needed a database partner with proficiency in PostgreSQL and AWS Aurora V2 to support their teams.

### **AWS recommended Pythian for proficiency in PostgreSQL**

To preserve the customer experience and enable Ruby Play Network's internal teams to concentrate on innovation rather than performance optimizations and solutions, Pythian jumped right in!

Pythian's partnership with Ruby Play aimed to ease the load on their internal teams so they could concentrate on innovation instead of performance tweaks and resolving issues. Our expertise in managing PostgreSQL databases and understanding of AWS Aurora Serverless V2 best practices were the perfect fit for Ruby Play Network.

### **The solution**

Pythian began conducting a Database Security Assessment and a Database Health Check to identify where performance and security optimizations could be made, while evaluating Ruby Play Network's environments to provide strategic guidance on better scalability. Pythian used our specialized toolset, revealing essential areas within Ruby Play's environment for performance and security optimizations.

### **Pythian enables availability and scalability for Ruby Play Network**

Our Database Health Check and Security Assessment found performance, availability, and security enhancements for Ruby Play Network's PostgreSQL cloud environment. Our team proposed a scalability strategy to boost performance, fortify security, fine-tune configurations, ensure availability, and improve monitoring.

### **Business need**

The company faced potential challenges with its growing data volumes on AWS Aurora V2. Unforeseen downtime or prolonged maintenance could have negatively affected customer experience, player engagement, and revenue.

To provide players with the best possible experience and tap into their full growth potential, Ruby Play Network needed to manage rising data volumes on their PostgreSQL databases on Amazon Aurora Serverless V2.

**Database and cloud performance optimizations:** Our key suggestions included performance optimizations through auto-vacuum, partitioning, table bloat, reindexing guidelines, updates, and other configuration tweaks. By implementing these changes, Ruby Play Network can better manage their growing data volumes while maintaining peak performance.

**Security best practices and compliance:** Pythian advised on regular updates, configuration settings, best practices, and toolsets to improve configuration and stability, helping Ruby Play Network strengthen their security.

**24/7 database monitoring:** The team recommended CloudWatch alarms for 24/7 monitoring, offering Ruby Play a complete view of their environment.

**Configuration and availability:** Pythian suggested measures for database backup, recoverability, high availability, fault tolerance, recovery, and protection. We suggested adjusting the retention setting for Performance Insights to a month, enabling Ruby Play Network to identify trends and make future predictions. These recommendations optimized updates, enhanced system performance, and reduced AWS Aurora cloud expenses.

**Reduced cloud costs:** Our recommendations empowered Ruby Play's teams to concentrate on innovation, raising awareness of potential vulnerabilities while minimizing cloud computing costs.

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**“Pythian worked closely with our development teams. By understanding our development process, they provided the exact recommendations our teams needed to improve performance as part of our sprint cycles.**

**Their PostgreSQL for AWS Aurora performance optimizations enabled our business to scale successfully.”**

– Dylan Johnson, Head of Technology, Ruby Play Network

## Business outcomes

The business goal for Ruby Play Network was to enable scalability for their data management processes alongside their rapid growth—all without compromising revenue or their developer's and player's experience.

Our database gurus offered advice allowing Ruby Play Network to elevate their player and developer experiences across the platform while enhancing operational data management processes. With the insights from Pythian's assessments, Ruby Play Network had better visibility into their database vulnerabilities, performance enhancements, and process improvements.

## Solution

Using advanced database discovery tools, Pythian performed a thorough technical review of Ruby Play Network's PostgreSQL AWS Aurora environment. We provided crucial insights and recommendations for a scalability strategy to bolster Ruby Play Network's operational data management, database performance, and security best practices and processes for the company as they grow.

Our PostgreSQL Security Assessment Service and Health Check offered a comprehensive view of the environment, complete with technical insights and improvement suggestions. These recommendations—including the minimum CPU and maximum CPU thresholds, CloudWatch alarms, and modifications to the retention setting for performance insights—resulted in better performance, reduced computing costs, and enhanced monitoring and alerting.

With a robust scalability strategy in place, Ruby Play Network was able to strategically prioritize which optimizations to implement as the company continues to scale. Ruby Play Network incorporated the recommended database performance enhancements and scaling solutions into their development sprint cycles. This proactive approach ensures top-notch customer and developer experiences on the growing platform while reducing overall system performance and AWS expenses.

**Business outcome**

Ruby Play Network is equipped with a scalability strategy for continued growth. They can confidently maintain database performance, availability, and security—even as data volumes increase. Ruby Play Network's premium player and developer experience will not be impacted as they keep their customer's experience top of mind.

**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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