Pythian helps long-standing online grocery delivery client scale to meet massive demand increase, with no new capex

Client
Online Grocery Delivery Services

Industry
Ecommerce / Grocery Delivery

Technologies
Oracle and Microsoft SQL Server

Business Need
When the Covid-19 crisis hit in earnest, this client experienced an unprecedented upswing in online orders. The company needed to scale its database systems quickly to successfully meet this explosion in demand, and ideally with no new hardware purchases.

Solution
Pythian DBAs worked around-the-clock for several days to stabilize the database, then spent the next several weeks fine tuning the system to meet the ongoing and growing demand spurred by Covid-19.

Results
Pythian saved the client a significant amount of new infrastructure costs right out of the gate, while ensuring the client continued to meet its target goal of three second page loads for clients using the online service. Despite this massive upswing in new business, the client's server loads remain at what they were before the crisis began.

Our client is an online grocery service that delivers to residences and offices throughout major metropolitan areas on the Eastern U.S. Seaboard. As its trusted database managed service provider since 2005, Pythian supports the client's Oracle- and SQL-driven data estate from end to end and has helped the company optimize data operations several times. In 2015, for example, Pythian made application and database changes that improved customer log-in times by 120X. And alongside our business partner, Miro, Pythian in 2019 optimized the client's Oracle licensing to the tune of $700,000 in savings in just a few weeks.

Then, in early March 2020, as the Covid-19 pandemic descended upon the NYC metro area and non-essential businesses were shuttered, this grocery service experienced an unprecedented surge in online orders. A system that previously processed around 12,000 orders per day was suddenly dealing with around 18,000 per day; in a matter of hours, the company's SQL server environment was facing a massive 38,000 transactions per second. The company needed to quickly scale its systems to meet this sudden demand while maintaining its target customer metrics, ideally with no new CapEx.

Pythian

Solution

Along with this explosion of new and returning customers in a very short timeframe, the amount of goods per order also increased by an average of 5X per order compared to historical averages – a potent double strain on the company's systems that ratcheted up in a matter of hours and just kept on growing. Pythian DBAs jumped on the issue immediately, working around-the-clock for several days to stabilize the system and avoid an outright crash. The Pythian DBA team then spent the next six weeks reviewing, tuning, and optimizing the database in both its internals and operating system layers in an iterative fashion, while also changing some of its internal mechanisms to reduce server load and improve responsiveness.

Result

Pythian DBA experts achieved an order of magnitude improvement in the performance of its Oracle and SQL environments, ensuring the client maintained a desired baseline page load time of three seconds with no new hardware investments (allowing the company to avoid more than $90,000 in potential CapEx, along with potential supply chain issues while they waited for new equipment to arrive). By mid-May, the client servers had been tuned and optimized to such a degree that loads effectively mirrored those of pre-coronavirus days – despite the continuing high demand for the client's online grocery services.

> As an e-commerce business delivering top notch customer experience has always been one of our top priorities. As an essential service facing unprecedented demand during the coronavirus crisis it was more important than ever for us to be able to support our customers. Pythian not only stabilized our databases quickly but were able to scale them to meet 5X demand with absolutely no new hardware purchase."
>
> **VP of Infrastructure**
> **Online Grocery Client**

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ABOUT PYTHIAN

Founded in 1997, Pythian is a global IT 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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