

Modern cloud platform expedites customer analytics

Client

Global communications technology provider

Industry

Telecommunications

Location(s)

Global

Technologies

- Google Cloud
- BigQuery

Overview

A global communications technology provider struggled to deliver timely analytics to customers, due to the limitations of their on-premises Oracle database. Pythian migrated the company to a high-performance Google Cloud and BigQuery environment that can easily ingest thousands of files every hour and deliver near real-time analytics. Critical customer reports now run in minutes (compared to hours). The company has already leveraged their modern cloud infrastructure to launch enhanced reporting and add value for customers.

Switching to Google Cloud and BigQuery helps communications technology provider deliver mission-critical reports with ease

When you're a global force in networking, IoT and other vital communications technology, your customers demand best-of-breed solutions. Their expectations for quality, speed and innovation extend all the way to the analytics they receive on their accounts. It can be a high bar to meet.

That's why a communications technology provider knew its legacy Oracle database needed to go. In an era of 5G speed and efficiency, their outdated, on-premises system couldn't pull its weight. It lacked the capacity to run critical customer reports and caused frequent customer service issues.

Pythian led a quick-turn project that migrated the global company to a sleek and modern alternative using Google Cloud and BigQuery. The resulting platform sets the technology provider up for long-term success, with high-capacity computing power and easy to configure controls.

Now, instead of waiting hours (or days) for reports, stakeholders access near real-time data, customize reports with ease, and clearly demonstrate value to their worldwide customers.

Challenges

With its previous system, the company struggled to:

- **Generate timely reports.** As the company's data volumes grew, their legacy Oracle system struggled. Slow pipeline performance jeopardized report availability and service-level agreements with major customers.
- **Deliver regional metrics.** Integrating customer data or creating regional analytics was nearly impossible due to the limitations of their legacy system.
- **Leverage analytics for new revenue.** The company realized there was potential to package and monetize its insights, but it lacked a systematic way to capture this valuable data.

Solution

Pythian helped the communications technology provider to:

- **Move analytics to the cloud.** The company chose Google Cloud and BigQuery to replace their on-premises Oracle database. Pythian developed a robust, flexible architecture and helped migrate their reporting infrastructure.
- **Speed performance.** The new cloud platform easily handles their high-intensity data needs, including ingesting thousands of files per hour and more than 3 terabytes of data each day.
- **Monitor data proactively.** A custom interface now monitors customer data proactively and triggers alerts for potential issues like service outages.

Customer service suffers as global company outgrows its Oracle database

For years, the communications technology provider relied on an on-premises Oracle database. Every day, the system pulled in performance data from customer networks and equipment around the world. Service-level agreements required the company to provide these vital analytics to customers on a regular basis.

Stalled pipelines and errors were frequent with the legacy system.

As their customer base grew—and more sophisticated equipment generated larger amounts of data—their legacy system struggled to keep up. Pipeline performance was at times agonizingly slow.

In addition, the company faced challenges when customers requested special reports, such as regional specifics or those that integrated outside data sets. They also saw an opportunity to enhance their customer service and add new revenue by packaging their analytics. However, they lacked a systematic, repeatable template to capture and deliver these valuable insights.

Google Cloud delivers an industrial-strength analytics infrastructure

The IT team realized they needed major changes. After evaluating their options, they selected Google Cloud and BigQuery to create a faster, more flexible cloud platform. Next, they hired Pythian.

With years of experience moving organizations large and small to the cloud, the Pythian team provided expert guidance and hands-on skills.

They started with a flexible infrastructure that could handle the heavy loads from the company's international customer base. This included more than 3 terabytes of data each day, with the need to ingest thousands of files every hour.

The new cloud platform easily ingests 3 terabytes of data each day.

Next, Pythian helped engineer a solution that could deliver the mission-critical reporting that the company and its customers required. The resulting BigQuery environment can handle tens of thousands of pipelines and scale easily for even more. The communications technology provider now can tap near-real-time data without overloading its capacity. Pythian even created a custom interface to push automated alerts to company systems when live data triggers key thresholds, such as potential service outages.

Results

With their modern Google Cloud and BigQuery environment, the company now has:

- **Near real-time analytics.** Customer reports now generate seamlessly for on-time delivery.
- **Improved customer service.** Quick access to relevant data and timely alerts ensure the company meets its service-level agreements and demonstrates value to its international customers.
- **New revenue opportunities.** With a modern cloud platform, developing regional views, custom reports and new analytic packages are all within reach. The communications technology provider has many options to use data to enhance service and boost sales.

Near real-time analytics demonstrate value and support new revenue opportunities

The company now has a modern cloud architecture that handles today's workload and provides a solid foundation for future enhancements.


In a highly competitive industry, analytics now flow seamlessly.

critical customer reports run in minutes, compared to hours (or not at all) in the previous on-premises system. The BigQuery environment set up by Pythian makes it fast and simple to add new customers, configure analytics to a customer's specific requirements or combine other data sets—all without tedious custom coding. This frees valuable internal resources for more strategic activities, rather than troubleshooting.

The company has already deployed new regional reports on top of their Google infrastructure, and they plan to develop value-added datasets that will add additional revenue. With these investments, they are well positioned to lead in a highly competitive industry.

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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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