How Pace Revenue halved compute costs and bolstered its algorithm with Google Cloud

PACE REVENUE

Client	Industries	Technologies	Location
Pace	Travel and Hospitality	Compute, Kubernetes	United Kingdom

Hotels are designed to cater to our desires. From snug beds that seem to make themselves, to en-suite facilities, comfort is king. Consumers spend hours comparing rates and dates via search engines, hunting for the perfect room for their needs. Behind the scenes, hotel operators put just as much effort into getting their room rates right.

Deciding what to charge for a hotel room is a constant balancing act. To maximize revenues, hotel operators need to set the rate of each room at the optimal price for each day, based on peaks in demand and other factors that are constantly in flux. In fact, the hospitality market is so fast-moving that it's impossible for a human to keep their finger on the pulse of these factors. That's where Pace Revenue comes in, with a software that gets the job done almost imperceptibly, like a hotel bed made up every morning.

The brief

"What our clients like about our pricing engine is the simplicity," explains Matt Yule-Bennett, Chief Technology Officer at Pace Revenue. The software uses machine learning to automate pricing decisions entirely or provide pricing suggestions, increasing revenues by 10% on average. "They just let our algorithm do its thing, and they're often surprised at how much they can charge for certain rooms."

Helping hotels save big with a lean IT crew

For the engine to "do its thing", Pace Revenue needs to continuously run property management system data through complex machine learning algorithms. To scale with these data volumes, Pace Revenue leverages a lean infrastructure built entirely on Google Cloud. "All of our workloads are containerized, and almost everything runs on Google Kubernetes Engine," says Matt. "This resource-efficient Google Cloud stack enables us to scale on demand to handle large data volumes, even with a small IT team."

With less time needed to maintain infrastructure, the team is free to focus on new solutions and optimize the quality of the Pace Revenue pricing engine. This agility drives innovation at Pace Revenue, which has grown steadily since the first client signed on in 2017. To keep up with this success, the IT team often needs to master new cloud technologies and solutions.

Checking the stack, curbing the spend

"We didn't always have time to establish best practices before we started using cloud solutions, and we wondered if there was untapped savings potential in our stack," says Matt. "And of course, reducing our cloud spend became even more important when COVID-19 hit. That's why we approached DoiT International."

In selecting a partner, Matt had two main criteria: support to build sustainable expertise in the company, and affordability. DoiT International surpassed Matt's expectations on both counts. "What immediately stood out was DoiT's business model," he says. "If we buy our cloud services through DoiT International, its consulting and technical support is included at zero cost. And from the get-go, we felt like the team went above and beyond to respond to our questions."

What we did

To begin working together, Pace Revenue first provided DoiT International with read-only access to its Google Cloud projects configuration. One week later, Matt and his team received a comprehensive report highlighting all of the potential savings in the Pace Revenue IT stack, with detailed instructions on how to implement the changes. "DoiT International gave us an incredibly thorough review of everything we're doing on Google Cloud," says Matt. "This included one major savings potential in our use of Google Kubernetes Engine that promised a massive impact on our bottom line."

Halving compute costs with a few tweaks

To power its pricing engine, Pace Revenue runs workloads on on-demand compute nodes with Google Kubernetes Engine. DoiT International saw an opportunity to reduce IT overhead with little effort by running these workloads on preemptible VMs instead.

Preemptible VMs offer the same machine types and options as regular compute instances and last for up to 24 hours, while operating at a much lower cost than regular instances. DoiT International showed the Pace Revenue engineers how to reorganize the architecture to make it more resilient and allow for the use of these more short-lived VMs. In less than a week, the team had implemented all the suggested infrastructure changes, cutting its compute bill in half almost immediately. "DoiT International's recommendations enabled us to swap 80% of our on-demand nodes for preemptible VMs on Google Kubernetes Engine, which come at only 20% of the price," says Matt. "That amounts to a reduction of more than 50% in our overall compute cost, with very little effort."

Making time for hospitality

Instead of spending time and effort researching cloud optimization techniques, the Pace Revenue team can now focus its energy on tasks that directly improve the customer experience. "We no longer have to spend time understanding how Google Cloud works because DoiT International does it for us," explains Matt. "Combined with the compute savings, we can use these resources to make our algorithm more capable and run it more frequently. And that adds directly to our customers' bottom line."

Working with its previous support services, Matt and his team often found it hard to get the point across with their questions, and misunderstandings were common. Today, this is no longer an issue, as Pace Revenue has a direct line to cloud engineering experts at DoiT International for any cloud challenges. "With DoiT International, support tickets immediately go to reliable subject-matter experts. The team always understands where we're coming from, and helps us get solving immediately. This creates a level of trust that we haven't experienced elsewhere."

An all-inclusive cloud experience

Trust is a key ingredient in the relationship between Pace Revenue and its hospitality clients, and with DoiT international, the team feels more empowered to make decisions that its clients can rely on. "Our customers are early adopters, and they trust our technology to take business-critical pricing decisions off their hands," explains Matt. "We're able to meet that trust by making smart decisions for our IT stack. And partnering with DoiT International has empowered us to make smarter decisions that maximize profits for our clients."

The result

Besides more profits, clients can also expect more features thanks to Pace Revenue's new analytics platform, built with the help of DoiT International. Powered by Google BigQuery, it helps hotel operators visualize data to drive decisions and strategies. "Standing on the shoulders of Google Cloud, and knowing that DoiT International has our back, we can build better solutions faster, even with our lean IT team," says Matt. "It enables us to leverage technology effectively and offer top-notch services that our hotel clients can depend on."

Now that it has quick access to proven cloud expertise whenever needed, Pace Revenue's IT team is ready to meet new challenges head on. "Our clients are a forward thinking-crowd, and we're always trying to stay at the forefront of technology," says Matt. "Our ongoing partnership with DoiT International ensures that we're aware of all the amazing things happening in the cloud, and that we've got the expertise at hand to make that technology work for us."

Matt Yule-Bennett, Chief Technology Officer, Pace Revenue

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