pepperdata

How Extole Exceeded Expectations for Cloud Cost and Resource Optimization with Pepperdata

About The Client:

Extole develops a customer lead growth platform designed to conduct marketing by driving customer acquisition and activation.

Through the usage of first-party and social network data about advocates, the company's platform assists brands to find and reach higher lifetime value customers, enabling clients to harness the power of online sharing to the benefit of their bottom line and engage consumers across all touch points, including a brand's website, email, and social networks.

Solution:

Extole worked with Rackspace, its trusted partner in cloud cost management and reduction, to implement Pepperdata Capacity Optimizer on top of Amazon EMR. Pepperdata's real-time Continuous Intelligent Tuning automatically maximized Extole's resource utilization, keeping cloud costs under control even as Extole's core business expanded.

Challenge:

Despite achieving a 45 percent reduction in overall cloud costs by moving a majority of its workloads to AWS Spot Instances, Extole leadership sought greater cost savings due to many customers' pandemic-driven budget cuts. The company was debating rewriting its entire big data stack to reduce hosting costs below the CFO-mandated target of 14 percent.

Additionally, Extole sought to reduce its increasingly expensive and unwieldy process of daily report generation, which required hundreds of virtual machines and significant personnel resources.

Results:

Within five days, Pepperdata reduced Extole's Amazon EC2 compute cost by an additional 30 percent. Pepperdata achieved this by using machine learning to intelligently inform the scheduler which instances could take more workload, dynamically and continuously, thus optimizing resource usage autonomously in real time at the application framework level.

A High-Growth Company Seeking Greater Efficiency

As the market for referral-based marketing platforms and customer-led growth exploded in the last few years, so did Extole's business. Extole invested several years in manual engineering efforts to reduce its Amazon EMR costs, including rightsizing their instances and moving workloads to Spot Instances, achieving an impressive 45 percent reduction in their cloud costs overall. At that point, the general belief was that everything possible had been done to achieve maximum cloud cost optimization.

Nonetheless, given Extole's profitability goal, the company was eager to invest in the continued reduction of bottom-line costs. Generating thousands of unique reports on a daily basis—some of which required hundreds of virtual machines—was growing increasingly expensive and unwieldy in terms of both cloud costs and personnel resources, requiring half of a full-time employee's (FTE) time dedicated to keep the system running. In addition to the cost of running the reports, some were taking up to ten minutes to generate, which created a daily inconvenience for the customer success team. Extole was thus intrigued to engage with Pepperdata when Rackspace, Extole's trusted partner in cloud cost remediation, made the introduction.

> **Within five days, Pepperdata reduced Extole's Amazon EC2 compute cost by an additional 30 percent.**

"This Sounds Too Good to Be True"

Pepperdata met with Ben Smith, Extole's Vice President of Technical Operations to review Pepperdata's autonomous real-time optimization capabilities that typically reduce the cost of running Spark and other batch applications in the cloud by thirty percent or more. The pitch was initially met with some natural "sounds too good to be true" skepticism by the Extole team.

> *"[I was thinking] there's no way there's a thirty percent overhead that everyone is paying that isn't fixed. The open source community couldn't possibly leave that as a giant gap."*
>
> **—Ben Smith, VP of Technical Operations, Extole**

However, within five days of being installed, the Extole team witnessed the Pepperdata "secret sauce" in action as Pepperdata Capacity Optimizer reduced Extole's costs by the predicted thirty percent. "Actually seeing it work was surprising," Ben said. "I was happy about that. That was cool."

A Friction-Free Install

From the start, Ben was also struck by Pepperdata's "sweet" onboarding process. Pepperdata installs in under an hour in most enterprise clusters and requires no exfiltration of large amounts of data, no access to Personally Identifiable Information (PII), and no tweaking and tuning—all of which impressed Ben.

"Getting set up [with Pepperdata] was a breeze," Ben said. "It was almost too easy." When the installation team ran into an issue with supporting a particular version of Amazon EMR, the Pepperdata team worked over the weekend to resolve it so the install could move forward uninterrupted. Reflecting on that experience, Ben noted, "It was really refreshing on the onboarding side of the house to see how quickly [the process] could move, both to meet our needs and to get the problem solved in a way to make it a great partnership going forward."

The Easy Button for Cloud Cost Optimization

Once installed, Pepperdata quickly enabled Extole to do more with less in three key ways:

1. Pepperdata Delivered Greater Throughput Without Increased Cost

Before bringing in Pepperdata, Extole had budgeted between 10 and 25 percent of machine resources as idle overhead for ad hoc reports. Kirk Lewis, Pepperdata Senior Solution Architect, pointed out that with Capacity Optimizer, this would no longer be necessary.

Pepperdata empowered Extole to recover these idle resources and immediately put them to work running reports at greater throughput.

After recovering these and other resources, Extole was able to run up to 27 percent more jobs without increased cloud costs, a dramatic throughput increase for a company that believed they had already done just about everything possible to optimize their cloud costs.

In addition, Extole's CFO had set a goal of reducing their cloud hosting costs to 14 percent of COGS. Once Capacity Optimizer was enabled, Extole was able to achieve this goal within weeks, even as a large new customer onboarded. In fact, Extole did not even realize the new customer had onboarded until Kirk pointed out that the company's cloud costs had remained flat despite the addition of the new workload-heavy customer.

Ben commented, "If we hadn't turned on [Pepperdata]… we would have had to sit in one of those meetings of shame with the CFO. Instead, we had this great conversation with [Pepperdata] where it's like, we actually saved you all this money, and you're going to hit your forecast numbers. You cannot ask for a better onboarding experience than that."

Extole's executives were also thrilled that they were able to achieve the desired reduction of cloud hosting cost relative to COGS while also onboarding this new customer without any increase in their cloud bill.

With Pepperdata, Extole was able to run up to 27 percent more jobs without increased cloud costs

2. Pepperdata Freed Engineers for High-Impact Projects

Because Pepperdata was able to increase the efficiency and throughput of Extole's customer reports, the engineering team was able to reallocate the engineer who had previously been devoting half their time to keeping the reports system operational. In fact, the entire engineering organization was able to free up their time to focus on new compelling projects to advance the business, such as an initiative to radically streamline their build cycle from four hours to twenty minutes.

Ben shared that he believed the operations and engineering teams could not have attempted such a large, high-value project if Pepperdata Capacity Optimizer weren't quietly remediating cloud costs in the background.

3. Pepperdata Optimization Reduced Reporting Time and Enhanced Employee Productivity

Once Pepperdata was installed, employees in the customer success teams and elsewhere across the company found that their daily reports ran faster, saving them precious minutes throughout the day, reducing the frustration of waiting for reports to load, and improving overall productivity.

"No one outside of the operations or finance teams [now] has to think about cost management for reporting, and that, I think, is immensely beneficial to the business."

**—Ben Smith, VP or Technical Operations, Extole**

For Ben, and, by extension, for his operations and finance teams, this increase in productivity and success across the company represented a significant soft benefit delivered by Pepperdata.

Outsized Gains for a Small Investment

By delivering greater throughput and measurable cloud cost savings, by freeing engineers to focus on higher value-added activities, and by accelerating report delivery, Pepperdata Capacity Optimizer quickly provided Extole with a number of unexpected wins, not only for the platform technology team, but also across finance, operations, and customer success teams—accompanied by a friction-free and rapid install process.

"Think about the cost management side. If you can get that money back and save some time too, with this amount of investment, it's really a no brainer. It's been awesome."

—Ben Smith, VP of Technical Operations, Extole
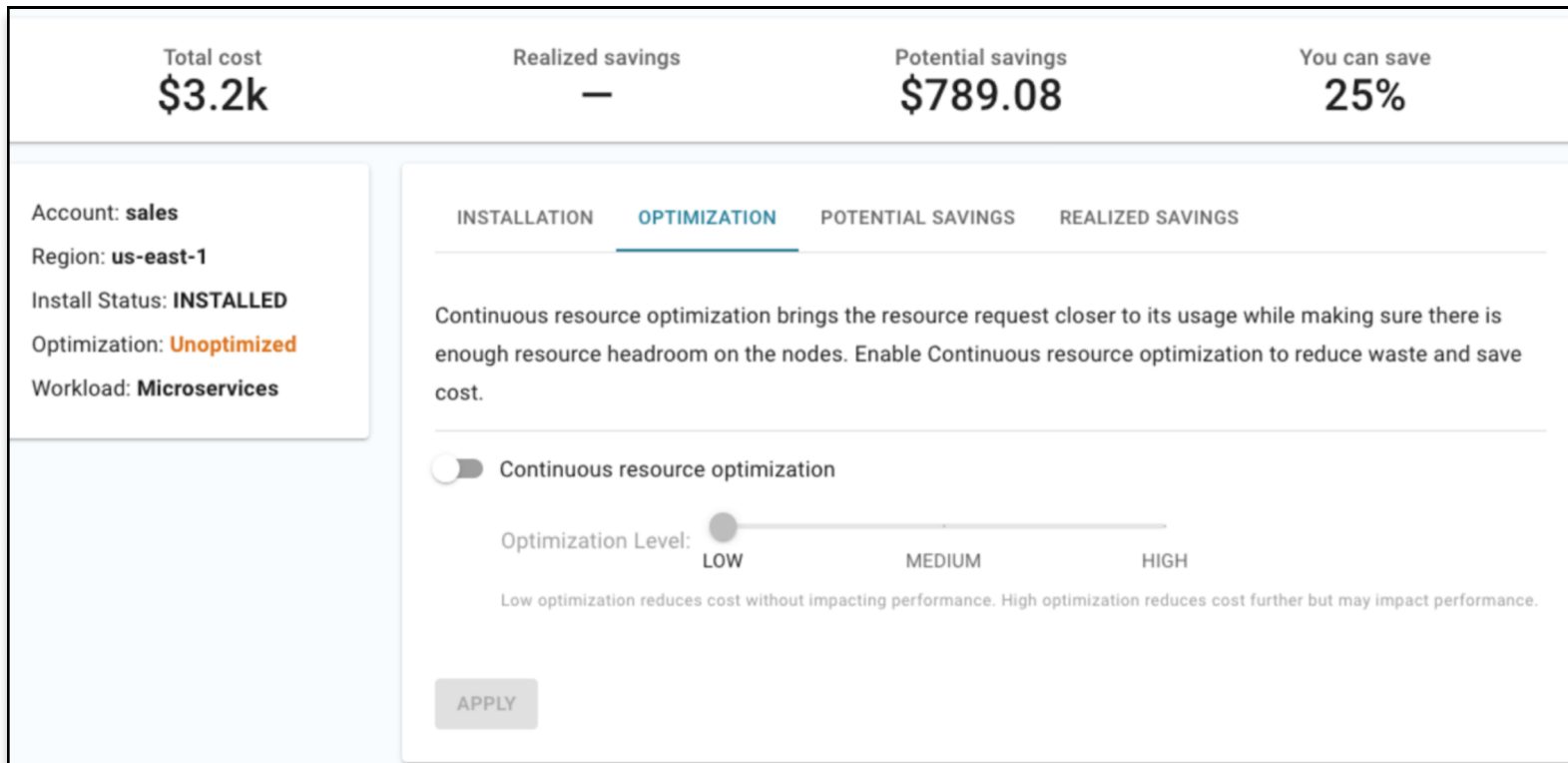
This Pepperdata Capacity Optimizer dashboard view shows the potential savings available to an unoptimized cluster, and shows the mechanism by which a user can choose high, medium or low optimization levels.

About Pepperdata

Pepperdata is the only cost optimization solution that delivers up to 47% greater cost savings—continuously and in real-time— on Amazon EMR and EKS with no application changes or manual tuning. Our customers include the largest, most complex, and highly-scaled clusters in the world, at top enterprises such as Citibank, T-Mobile, Autodesk, Securonix, Royal Bank of Canada, and those in the Fortune 5. For more information, visit pepperdata.com.

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