

Coastal is a global provider of contact lenses and eyeglasses. When poorly performing storage clouded its business performance vision, the company installed an all-flash array from Pure Storage. By doing so, the company has dramatically improved its business reporting procedures and opened new avenues for analyzing company performance.

Coastal™

BUSINESS TRANSFORMATION

Finance and business-intelligence teams generate a greater variety of reports, expanding their understanding of key business metrics. Application development teams bring new features and functions to market more quickly. And the smaller storage footprint occupied by Pure Storage has resulted in significant savings in operating costs.

GEO

North America

INDUSTRY

E-commerce

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Aman Kang, *Manager, IT Infrastructure*

COASTAL SEES ITS BUSINESS OPERATIONS MORE CLEARLY AFTER INSTALLING SMART STORAGE

Thanks to Coastal, millions of people have better vision. Founded in 2000, the Vancouver, Canada-based company is the global leader in selling contact lenses and eyeglasses over the Internet.

Given the global scope of Coastal’s business operations, it is increasingly important for line managers and corporate executives to get a clearer and more timely view of key performance indicators (KPIs) on a regular basis. But as Coastal has continued to grow and diversify, that became a more challenging function to provide.

“The highest priority is to prepare monthly financial reports for our corporate parent,” noted Aman Kang, Manager of IT Infrastructure for Coastal. “Over time, we found it was taking more and more time to finish those reports. That meant we had to prioritize our workloads and schedule other business activities around the need to finish the monthly reports.”

The IT team investigated the source of the performance problems. “We looked at what the primary bottlenecks were in our ERP system,” Kang reported, “and we found that the clear bottleneck was the storage. We had unacceptable latencies — completely variable, and as high as 100 milliseconds.”

Other storage-related problems also hampered IT effectiveness. “We couldn’t do snapshots on our virtual machines because it would take so long to merge the snapshots. We’d have periodic outages on various servers no matter how brief we kept the snapshot.”

LEGACY STORAGE IMPEDED CRITICAL ERP APPLICATION

To work around the performance problems, the IT team would process financials one week at a time to lessen the workload at month end. Even so, said Kang, “We would still have to delay other workloads to finish on time. This impacted other operations in the company, because their work had to be put off. The storage infrastructure couldn’t handle the contention between multiple workloads, so we had to set priorities.”

In search of a solution to the performance bottlenecks, Kang and his team looked at several suppliers of storage, and ran proof-of-concept trials. In the end, the clear winner was Pure Storage, based on overall performance and key features such as de-duplication and compression, snapshots, and encryption-at-rest.

COMPANY:

Coastal
www.coastal.com

USE CASE:

- VSI – VMware® vSphere®
- Database – Microsoft® SQL Server®

CHALLENGES:

- Poorly performing storage lengthened the time it took to prepare essential reports.
- Rapid growth outstripped the capabilities of the IT infrastructure.
- Timely business intelligence reporting was challenged by a lack of processing power.

IT TRANSFORMATION:

- Key reports are now prepared without delay.
- Business intelligence unit is able to broaden its analysis of customers and the product evaluation process.
- High data-reduction rates allow application-development teams to run multiple copies of production databases without impacting company-wide performance.

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SIMPLIFIED MANAGEMENT THE DECIDING FACTOR

“But the key factor — and there was no contest — came down to management. I don’t have a dedicated storage administrator on my team, and the effortless management of the Pure Storage array was absolutely compelling,” Kang said.

Coastal purchased a Pure Storage FlashArray™//M50, which now hosts virtually all the company’s data and applications except the customer-facing websites. Key applications include Microsoft AX for enterprise resource planning, and Microsoft BI for business analysis.

“The speed of deployment was exceptional; much faster than what we would have had with competitors,” Kang noted. “Pure Storage documentation for integration with VMware and SQL were excellent, and really streamlined the installation process.”

Once Pure Storage was installed, there was an instant improvement in the most critical area — preparation of month-end financial reports. “The SQL part of the job went from nine hours to less than one hour,” Kang reported. “The following month, we put all four weeks together and processed them all at once, and it still took less than an hour.” He added, “Applications used to freeze even when there wasn’t anything broken. That has all disappeared since we installed Pure Storage.”

BOTTLENECKS REMOVED, APPLICATION PERFORMANCE SOARS

Looking back at his old storage infrastructure, Kang recalled, “We were so bottlenecked that we weren’t able to provide real numbers in terms of the performance we needed. When we did the POC, we found that one of our servers would use 12,000 IOPS. But our previous storage environment could give us, at most, 3,500. The Pure Storage array regularly performs at 30,000 IOPS — an almost 10x improvement — and has the capacity to reach 100,000. That’s more than enough headroom to accommodate our future growth.”

After suffering through latencies reaching 100 ms with its old storage system, Kang reported that since the change to Pure Storage, “We never have gone above 1 ms. We experience no disruptions at all.”

The high-performing storage has produced some dramatic results in the IT department. A full refresh of production databases used to take a little over 112 hours. With Pure Storage installed, it takes just over 7½ hours. “That frees up time for us to do a lot more things than just routine maintenance.”

The impact of the new storage has been seen elsewhere in the company as well. For example, the data-reduction features of the Pure Storage array make it possible for the software development teams to maintain multiple copies of the production database, with no requirement for additional storage. That speeds the rollout of new applications and features, and allows developers to start whittling down the backlog of requests that piled up when there was limited processing capacity.

With its previous IT infrastructure, Coastal used a cloud hosting service to handle much of the application-development loads, because it provided faster processing. “Now, it’s just the reverse,” Kang noted. “The workloads running on the Pure Storage array are much faster. And when developers ask us to do restores or spin up a server, it takes so little time. That not only accelerates time-to-deployment, it also lowers our costs for cloud services.”

To support the company’s continued growth, Kang is looking to expand its use of cloud services to complement its on-premise IT infrastructure. That’s why he values the partnerships Pure Storage has established with other providers of private-cloud

and hybrid-cloud solutions. “Knowing we can use either a premise-based solution or a public-cloud option gives us a lot of flexibility to accommodate our dynamic business environment,” Kang said. “Paying for cloud services can sometimes be desirable, but using our own resources is our first preference.”

IMPROVED ANALYTICS PROVIDES A CLEARER PICTURE OF THE BUSINESS

Perhaps the biggest impact of the new storage is being felt in finance and business analytics. “Once people realized that business processes were finishing 10 times faster than they had experienced previously,” Kang said, “they started asking what else they could do to analyze the company’s growing volume and variety of data.”

The limited performance of Coastal’s previous storage system had restricted the types of analysis BI teams could run. With Pure Storage installed, the opportunities are greatly expanded. For example, Kang noted, “they previously ran reports based only on sales data. Now, we can draw upon data from searches and our websites and merge them into a single data source to perform a much broader range of analysis.

“In addition, the BI teams can broaden their exploration of data analytics for greater insights without impacting the performance of other business operations or having to worry that the window of opportunity to run their analyses will close.”

The ability to consolidate mixed workloads simultaneously, he observed, “makes our design tasks much simpler and easier. We have far fewer silos of information.”

PURE STORAGE FUTURE-PROOFS A GROWING BUSINESS

Looking forward, Kang anticipates that the company’s continued growth will create a need for more processing and storage capacity. “So, I need resources that are flexible and cost-effective in terms of expansion.” Pure Storage meets that need fully with the Pure Evergreen™ Storage program, which enables storage that is deployed once and upgraded as needed, for a decade or more. Components can be mixed and matched — all online and without performance disruption — to keep storage dense, efficient, and modern.

“It’s a very attractive way to accommodate future growth,” Kang observed, “while staying on the latest technology and avoiding a forklift upgrade.”

Kang’s satisfaction with Pure Storage also extends to ease of management. “Before Pure Storage, we were spending a significant amount of time just managing the storage. It was taking hours of my team’s time, and as a small group it was a burden to dedicate the resources and highly specialized knowledge that the previous storage system demanded. With Pure Storage, that has all gone away. We have had the Pure Storage array in production for months, and we only log into it for routine monitoring.”

He added, “It’s hard to believe, but our admins haven’t had to do a single thing in terms of fine-tuning or troubleshooting the Pure Storage array. Having spent endless hours optimizing legacy products, this is, quite frankly, truly remarkable.”

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