

# 10x Faster Queries, Zero Storage Management and an End to Help Desk Tickets



ALTAIR GLOBAL CASE STUDY



Professional Services  
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## Challenge

When the company's Dell Compellent storage neared end of life, the IT team found deal-breaking drawbacks with most solutions on the market.

## Results

- Zero storage management, down from one day a week
- 3.8x data reduction
- 10x boost in SQL query performance
- 2x database performance, and ½ the latency
- Drop in performance-related help desk tickets from 170 to 0

“I used to spend about one day a week managing storage. Now, it's down to zero.”

**Cameron Joyce**  
Senior Systems Engineer

## Company Challenge

### Lagging Performance, Frustrated Employees

The logistics of relocating employees go well beyond lining up movers; from coordinating housing to immigration issues to language training. The goal: get employees from point A to point B with minimal disruption to productivity.

In recent years, Altair Global hit a turning point with its storage infrastructure when it experienced lagging performance on its main production SQL clusters and SQL development environment using Dell Compellent storage. In fact, latency frustrated end users so much that they logged a significant number of help desk tickets every week.

To speed performance, Cameron Joyce, Senior Systems Engineer, initially tried adding flash to newer Dell servers to speed up VMs. While it improved performance, it made Joyce's job harder. “Managing it took a lot of effort and I realized the approach wouldn't scale as we grow,” Joyce says.

As Joyce explored other storage options, he found drawbacks with most. With all-flash arrays, flash would be too far from the VM and was prohibitively expensive. He considered hyperconvergence to get flash on the host, however, that would require him to replace his server infrastructure prematurely. And with software-defined storage, Joyce found incomplete features and a questionable track record of success with database performance. Moreover, he would have to purchase and maintain standby resources to protect data in the event of server failures – resources they simply couldn't afford to leave standing idle and not delivering value.

## Results

### 3.8x Data Reduction for Production Workloads

Datrium's Automatrix platform allowed Altair to retain its current mix of Dell Power Edge R730 and R720 servers in combination with any type of solid-state disks. With Datrium, servers remain stateless and thus easier to maintain. Plus, the company could more simply scale its infrastructure while assuring data availability, even with multiple server failures.

For a proof of concept, the Datrium team came on site to set up the DVX, completing it in just a couple of hours. Using one of Altair's SQL servers, they ran a number of synthetic workload tests with Datrium topping the Compellent solution with 3.5x higher IOPs at 1/3 the latency. Capacity gains from Datrium's always-on deduplication and compression likewise beat the incumbent.

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“In testing with Datrium, we saw a 9x data reduction,” Joyce says. “It was a test workload and we didn’t expect those kinds of numbers to continue in production, but we were blown away to see 3.8x data reduction versus our previous storage solution.”

#### **Zero Storage Management**

From initial setup to ongoing management, Datrium reduced the burden on the IT team. Servers remain stateless, freeing the team from data rebuilds in the event of server patches and failures. Additionally, Joyce saves time by overseeing storage and VMs all in VMware vSphere, no longer managing any LUNs or storage artifacts. “I used to spend about one day a week managing storage,” he says. “Now, it’s down to zero.”

#### **A 10x Boost in SQL Query Performance**

Datrium DVX maintains a complete copy of VM data in flash on the host (Compute Node). Compute Nodes provide local VM and I/O processing resources, and all reads stay in local flash, maximizing speed. At Altair Global, that means a 10x boost in SQL queries, 2x the overall SQL performance, and half the latency on transactions – all running in Datrium’s Insane Mode.

That’s speed that end users have noticed. In fact, performance has improved so dramatically that help desk tickets related to server and VDI performance dropped from an average of 170 per week to 0. “Queries now happen instantly,” Joyce says. “Storage is no longer a bottleneck.”

#### **Economics to Support a Solid DR Plan**

With the additional capacity, Datrium offers a much more economical path for Altair Global now and as the company grows. The company can more affordably add a second DVX at a disaster recovery site.

On top of it all, Joyce values the people at Datrium, who have been there for him from deployment through ongoing support. “Every single person I have dealt with at Datrium is super knowledgeable,” he says. “They know my name and my company. I’ve never had a better support experience.”

#### **About Altair Global**

Founded in 1989, Altair Global is an independent, global mobility management company that offers comprehensive relocation and assignment solutions in more than 180 countries. Its clients are as diverse as its workforce, and include members of both the FORTUNE and Global 500. Altair Global’s services are delivered from regional service centers across The Americas, EMEA, and APAC.

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