

Clearwater Analytics accelerates key production workloads on Kaminario K2

Challenge

Clearwater Analytics is an innovative Software-as-a-Service (SaaS) provider of investment portfolio reporting and analytics for institutional investors in over 4,500 organizations including corporations, insurers, asset managers, and financial institutions. The company develops and hosts web-based services that help their clients automate critical investment data aggregation, accounting, compliance, reporting, and risk analysis processes.

Prior to acquiring several Kaminario K2 all-flash arrays, Clearwater used NetApp arrays with legacy hard disk drives in their production, DR, and DevTest environments. As the amount of data and the number of customers went up over time, performance was increasingly impacted by high latency and low throughput. In particular, production operations were affected in two critical areas: reconciliation and reporting.

Reconciliation processes are run across every account, often several times a day, and form a key check point to ensure that incoming data on holdings, transactions, and security master information is correct and consistent. As Clearwater's business volume grew, three-quarters of allotted time was spent just to load records from the database. If left unattended, these delays could lead to missing service-level agreements (SLAs) and a longer-term negative impact on business.

The reporting process was also impacted by slow loading of certain data from the database. While many reports ran adequately even on the previous storage systems, some larger, specialized reports experienced longer load times, impacting some customers. The sales staff also observed these delays occasionally when demonstrating the product.

Solution

Clearwater considered several options to address the production performance challenges. An upgrade to the existing NetApp array, which most likely would not solve the underlying issues, was as expensive as acquiring a new array. Several all-flash and hybrid storage vendors were also evaluated, but they were either too costly or not production worthy. Kaminario K2 was selected based on its attractive price/GB of usable storage, significant improvements in performance and the collaborative, open approach of the local sales team. The Clearwater team was very excited to find out that diverse requirements in several environments were addressed with the same solution.

Clearwater deployed separate K2 arrays for the production system, the disaster recovery site, and the DevTest workflow, each with 45TB of effective storage capacity. The improvements were dramatic: reconciliation database load times were reduced by 75%, providing more headroom to get the data loaded during the limited daily time windows. Average response times on long running reports were reduced by 65%. With the K2 arrays serving differing needs of various workloads, Clearwater is now able to continue to meet increasing demands, both in the performance of its products and the agility of its development teams.

“Our number one factor was the cost/GB. We felt that many of the pure flash arrays were either too costly or not production worthy. Kaminario impressed us as being both enterprise ready and cost effective.”

~James Price, Director of Product Development, Clearwater Analytics

clearwater

USE CASE:

Production, DevTest and DR systems for web-based Investment Accounting & Reporting services

APPLICATIONS:

Internally developed investment portfolio management SaaS plus DR site and DevTest systems with 135 TB of effective storage capacity in SQL Server databases

GOALS:

- » Improve performance of critical reconciliation and reporting processes
- » Speed software development and QA cycles
- » Improve DR effectiveness

RESULTS:

- » Reconciliation load times reduced by 75%
- » Long-running report load times improved by 65%
- » Diverse needs in various environments served by a single solution
- » Improved customer satisfaction

