

Kaminario Boosts Global Credit Card Company's Business Intelligence and Data Warehousing Application Performance by 20x–40x

The Challenge

Customer buying patterns and habits are critical to any business, but to a credit card company, they can be a major factor in increasing customer retention and growing revenue. A leading global credit card and financial services company, with more than 1.8 billion credit cards in circulation worldwide, supports a business intelligence and data warehouse application to analyze customer buying behavior for its vendor partners. This information is critical for the company's vendors in order to provide them with analysis of "frequent buyer" trends. This analysis enables the credit card company's partner vendors to create more targeted customer marketing campaigns.

The business intelligence (BI) application was extremely complex and slow in performing ad hoc queries against its large data warehouse of customer information (billions of records). The queries took too long to run before a report was produced, making it difficult to generate new reports in a timely fashion based on new parameters. In a number of cases, errors in the queries were showing up, causing many queries to be repeated and reports to be rerun. The company needed to provide faster responses to queries in order to quickly produce more variations of the reports and to ensure the accuracy of the data.

The Solution

The credit card company deployed the Kaminario K2 DRAM storage appliance in a test environment as a comparison against its legacy high-end storage production system. The Kaminario K2 appliance architectural advantages required just one-third of the data ports required by the legacy system and were available at a fraction of the price to support the same BI and data warehousing application environment.

The Kaminario K2 delivered more throughput (1.5 GBps) than the legacy system (50–150 MBps) through fewer data ports. In addition, the BI and data warehouse application response time on the Kaminario K2 was 20 times faster on average, with peak performances 40 times faster. The I/O waits on the Kaminario K2 were reduced by a factor of 10. The entire BI and data warehouse environment was accelerated to easily handle the large number of queries that the company was processing for its partner vendors, enabling them to deliver marketing programs to their customers faster.

"Kaminario has enabled us to deliver customer information to our partners 20 to 40 times faster and more effectively. The faster we can deliver this valuable data, the quicker our partners can turn that information into sales and grow our business."

— CIO, Global Credit Card Company



Extreme Performance

The Kaminario K2 family of all solid-state SAN storage solutions accelerate high I/O, latency-sensitive applications by consistently delivering higher throughput, ultra-low latency and improved system utilization at a significantly lower cost and smaller footprint than legacy SAN storage.

- IOPS: 100K – 1.5M IOPS
- Throughput: 1 GB to 16 GBs
- Consistent performance for any workload, with no degradation over time
- Latency: Read: 120 µsec to 260 µsec; Write: 150 µsec

Self-healing High Availability

K2 boasts full N+1 hardware redundancy and thus maintains operational status and data availability with no single point of failure. Fast and automatic recovery means a reduction in costs related to data loss and unavailability, including wasted IT services time in rebuilding data stores.

- Redundant system hardware and uninterrupted power supply (UPS)
- Internal data protection and resiliency with mirrored hard disk drives
- Automated hardware and data recovery while maintaining data integrity

Modular, Cost-effective Scalability

K2 enables cost-effective growth — so you can start small and grow as you need more capacity and/or performance. K2 also maximizes storage utilization and extends the life of your storage infrastructure, increasing ROI and reducing TCO.

- Modular, scale-out architecture
- Scale performance and capacity independently
- Consolidate high I/O and latency sensitive applications on the K2 that you had on multiple servers

Easy Installation and Management

K2's industry-standard components make it easy to install and maintain. Its storage system management makes it easier for IT staff to manage and control. K2 enables IT organizations to reduce operations, maintenance and service costs.

- Standard block device, fully transparent — no change to applications, database or data
- Single-system manageability
- Automatic data distribution quickly delivers extreme performance out of the box
- Fast deployment — less than one day to install



Kaminario K2

Kaminario is a leading supplier of high performance all solid-state SAN storage. Its Kaminario K2 family of SAN storage solutions eliminate I/O bottlenecks and dramatically reduce latency to accelerate critical business applications at a significantly lower cost and smaller footprint than legacy SAN storage. The K2 is the first self-healing, highly available all solid-state SAN storage to give users the freedom to choose the right SSD media for their unique application workload and budget. The K2 supports millions of IOPS, tens of GB/s of throughput, extremely low latency, and all without compromising on enterprise reliability or ease of use. Kaminario K2 solutions are application, database and file-system agnostic. Kaminario K2 solutions are seamless to integrate and easy to deploy and maintain; installation and configuration can be done in less than one day. Kaminario is simply faster.

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