

**WHO:**

Memorial Hospital

CHALLENGES:

Storage costs, VDI performance & application latency delays for 3000 users

IT ENVIRONMENT:

1800 virtual desktops, Cerner HRM, VMware

SOLUTION:

Two Kaminario K2 in two data centers for SAN and VDI, application and image access

BENEFITS:

Reliable, affordable, high-performance Virtual Desktop Infrastructure

VDI Performance, Cost Effective and Predictable

Reliability and Speed Gains in Support of Patient Care

Executive Summary

Electronic Health Records (EHR) have become an essential element of running any hospital or clinic. To better support patient care, Memorial Hospital was moving to consolidate systems, healthcare applications and modernize their IT infrastructure. In particular, they needed high-performance storage to support the implementation of 1800 virtual desktops. Memorial implemented Kaminario K2 all-flash storage and achieved their performance goals at an affordable cost with a clear path to future growths.

Hospital Overview

Memorial Hospital and Physician Clinics is a not-for-profit multi-specialty medical complex in Gulfport, Mississippi supporting a comprehensive range of health and wellness services. Memorial is licensed for 445-beds and more than 95 Physician Clinics across the region. Memorial offers several comprehensive clinical programs, ranging from emergency medicine to women and children services, cardiovascular services and oncology. Memorial also provides several medical specialties unique to the coast, including pediatric subspecialties, a Level II Trauma Center, and Mississippi's first nationally certified Primary Stroke Center. Memorial continues to expand facilities and add new staff and equipment to keep pace with ever-changing technology and a rapidly growing community.

The Challenge

Change. One of the biggest challenges in Healthcare is the pace of change brought on by the shift to digital and electronic technologies. Providing a full continuum of care, Memorial is clinically integrated but their IT systems were not. They had followed a typical hospital systems approach that selected best-of-breed solutions for the Emergency Department, Surgery, and Clinic Medical Records. But the systems didn't interoperate. There was no efficient way to view a complete patient record. And that had potential impacts on the quality of care. What's more, the government system for reimbursements was about to change and would require a new level of data analytics beyond the capabilities of their existing systems.

“We like the company. We like the people. We like the logic that manages the storage. We like the footprint. We like the price/performance value proposition. For me, I liked the future capabilities I’ll have for expansion. Once I looked at those variables, it was an easy decision.”

Gene Thomas,
Memorial Hospital CIO



The Memorial IT team knew that a better health records system would benefit patient care as well as long-term costs of ownership. So, they began a time-consuming multi-step process to address all of the necessary changes. To start, they implemented a cloud-based Cerner health records management system. That integrated system could provide physicians with virtual desktop infrastructure (VDI) access to a full medical chart through the complete arc of patient care. And that triggered their next challenge.

The VDI implementation jumped from 300 to 1300 desktops overnight. Constraints of IOPs and latency became immediately apparent. If performance thresholds were crossed, all users had to be shut down while the system reset. Even as they added more flash drives, their hybrid storage systems just couldn’t keep up. These were major service interruptions that impacted every practitioner across their network and called the new VDI solution into question. A different performance approach became their central challenge

Examining Options

Even as their VDI storage became strained, Memorial’s SAN storage systems were also about to go end-of-life. They too had suffered from performance issues. So, the replacement search began for a comprehensive solution.

The price was important, and their technical preference at the outset was for new all-flash storage arrays - until they started seeing price quotes. The available budget pushed them back to evaluating hybrid arrays with an expectation that hybrid would be all they could afford. They looked at multiple vendors, and then a lunch meeting with Kaminario changed their thinking again.

Compared to other options, the Memorial team could appreciate Kaminario’s value for the price. More than fast flash performance, Kaminario was a complete package that could economically and effectively address all of their requirements. A few customer reference calls confirmed it. No proof-of-concept needed.

IMMEDIATE BENEFITS:

- Increased performance and decreased latency to less than 1ms
- Backup times reduced by 4X
- Eliminated performance induced system crashes and hours-long recoveries
- Desktops come up faster; images and applications load immediately
- Affordable, feature-rich, all-flash storage performance
- Ease of use, including powerful monitoring tools and analytics
- Future flexibility to scale-up and scale-out without service interruption

The Solution

The transition from paper to electronic records was a major undertaking. At the executive level, cost was a key concern. So, a practical, affordable all-flash storage solution had obvious appeal. Kaminario satisfied primary performance requirements. But the Memorial team also appreciated the added benefits of an all-inclusive package that meant no more separate licenses adding costs for each bit of functionality.

Kaminario all-flash arrays replaced aging CLARiiON systems in both Memorial data centers. Backup protocols were reestablished (a must-have on the Gulf coast). Performance constraints disappeared on data delivery speeds. Doctors gained immediate access to current MRI and X-ray images that had been previously slow to load. Now they had access to real-time metrics for simplified performance analysis and troubleshooting. And they had a clear path to accommodate expected data growth and to easily scale performance as required.

What's Next

Memorial will continue to look at the "safer, more reliable, faster" K2 all-flash array for potential replacement of devices that store radiology and cardiology images.

"The way that big vendors operate, every time we turn around there's another module we need to pay for or another license we need to buy. Kaminario's all-in solution does away with that. Much simpler for both operations and budgets"

Ron Hedges,
Memorial Hospital Director of
Information Systems and Technology

"Kaminario makes all-flash affordable within a unique, elegant, flexible architecture. They understand that cost is a significant issue and, as an innovative, nimble company, they've balanced cost without sacrificing performance or functionality."

Gene Thomas,
Memorial Hospital CIO



Contact

Contact a business development representative to answer any questions you may have.



Schedule a Demo

Schedule a demo with an engineer and learn if Kaminario's solution works for you.



Request a Quote

Request a quote for your application from our business development team.

About Kaminario

Kaminario, the leading all-flash storage company, is redefining the future of modern data centers. Its unique solution enables organizations to succeed in today's on-demand world and prepares them to seamlessly handle tomorrow's innovations. Only Kaminario K2 delivers the agility, scalability, performance and economics a data center requires to deal with today's cloud-first, dynamic world and provide real-time data access -- anywhere, anytime. Hundreds of customers rely on the Kaminario K2 all-flash array to power their mission critical applications and safeguard their digital ecosystem. Headquartered in Needham, MA, Kaminario works with an extensive network of resellers and distributors, globally.

For more information, visit www.kaminario.com

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