KEYSTONECARE IMPLEMENTS V-LOCITY
Speeds Applications and Increases VM Density without New Hardware

KeystoneCare
A LIFE EXPERIENCE

When poor application performance had caseworkers unable to process patients and document activity in a timely manner, IT needed an efficient way to get their people back to focusing on what matters most—providing comfort and care to patients at home or in hospice.

CHALLENGES

- I/O-intensive workloads impacting application response time

- Critical EMR application running slow, making it difficult for business users and caseworkers in the field to access, modify, and save patient records

- Considerable IT time spent troubleshooting and tuning, only for marginal performance gain

V-LOCITY® BENEFITS

- 50% or greater application performance improvement—with no additional hardware

- Latency and throughput dramatically improved

- True "set and forget" management

- Compatible with all SAN/NAS systems

- Easily deploy to the largest virtual, physical or cloud environments in just five clicks

- Before-and-after performance reporting to validate performance gains

- Enterprise-wide visibility into I/O performance, from server to storage

THE CUSTOMER

KeystoneCare provides comprehensive hospice and in-home care to patients that have been hospitalized, require assistance in daily living, or are facing terminal illness. Based in Wyndmoor Penn., KeystoneCare is dedicated to protecting the time families have together, guiding them through difficult choices with the utmost care and respect for how patients choose to live.

THE CHALLENGE

KeystoneCare's VP of Technology, Shane Kolp, was starting to hear grumbling. His users, who access large files, frequently move between apps, and read and write from the database, were experiencing slow load times and even slower report queries. "Most work is done in our electronic medical records system," explains Shane. "We have quite a bit of knowledge worker activity, like running reports, analyzing outstanding issues that require resolution, and making sure patients are admitted and handled in a timely manner."

Shane's team supports intake, quality assurance, finance, human resources, billing, development, and an in-patient hospice facility, which means Shane is responsible for KeystoneCare's ability to focus on business-at-hand, with respect to healthcare reform and budget constraints typical of a non-profit organization.

Shane also has caseworkers in the field, who run endpoints that access virtual servers in the data center. "They are the front line staff who care for the patients and document all activities in order to comply with regulations," he explains. "If they can't do their jobs, we can't bill and we can't comply with regulations. Performance and reliability for those users is a huge priority for us."

"We're a high-volume business with limited resources," Shane says. "When issues come up that impact people's ability to do their jobs, we hear about it." And Shane's team was hearing about it—complaints coming in daily that reports were slow, query times were unacceptable, and application response was painful. "We don't have the ability to endlessly add resources," he adds. "We have to squeeze every drop of efficiency out of what we have, so I started looking for a smart approach to solving our problems."

CASE STUDY

> "V-locity has become
> *de facto* in our data center.
> It means I don't worry about
> performance, my users can
> focus on providing care, and
> my budget isn't consumed
> by hardware costs."

SHANE KOLP
VP OF TECHNOLOGY
KEYSTONECARE

ENVIRONMENT

- Microsoft Hyper-V
- SAP Sybase for EMR applications
- SQL Server for all other applications, including data warehousing, accounting, and development CRM for fundraising activities

V-LOCITY FEATURES

IntelliWrite® I/O optimization technology automatically prevents split I/Os from being generated when a file is typically broken into pieces before write.

IntelliMemory™ intelligent caching technology caches active data from read requests using available server memory.

Benefit Analyzer embedded benchmark provides before/after performance comparisons, enabling IT to measure workloads and performance in a real-world environment.

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THE SOLUTION

According to Shane, "We did an evaluation of V-locity and saw significant performance gains on our servers with the highest I/O loads." After running V-locity for the course of the 30-day evaluation, Shane saw significant improvement in IOPS, workload processing, and application response time. "No more calls about performance issues and productivity—that was all the convincing I needed."

Before V-locity, Shane's team had undertaken a number of troubleshooting and tuning activities, but saw only marginal improvement. With application performance still at an unacceptable level, the team deployed V-locity to all VMs and physical servers and saw significant improvement—practically overnight. Installed on Windows VMs at the operating system layer, V-locity nondisruptively optimizes I/O at the source—reducing the I/O requirement for any given workload. By preventing a surplus of I/O from getting funneled into servers, network, and storage, the entire infrastructure (compute, network, and storage) derives benefit because only productive I/O is generated by the VM.

With IntelliWrite® technology, V-locity automatically prevents split I/Os from being generated, allowing more data to be packaged on every write. With IntelliMemory,™ V-locity caches active data in available server memory to further reduce I/O demand on storage devices. As a certified VMware and Hyper-V-ready solution, V-locity automatically and transparently improves application throughput and latency on heavy workloads running on x86 platforms.

THE RESULTS

In the year since rolling out V-locity, Shane's team has eliminated application performance problems and his users have been able to focus on work that matters—not on the frustration of slow applications and reports that run forever. V-locity has reduced I/O so dramatically, the IT team has been able to increase VM density by 40%, while eliminating performance-related calls from the field.

"Hardware doesn't do our day-to-day tasks, it just processes the commands of the software," Shane says. "We'd much rather add solutions that make people's lives easier, and those solutions cost money. I need to save where I can, and if I can add those services without adding hardware, that's a win-win."

In the past year, KeystoneCare's IT budget has been redirected to business intelligence reporting, data warehousing, and a current project to implement electronic forms and workflows—moving information from end-to-end without requiring signatures and paperwork.

"The project to implement physician electronic signatures is huge for us—it cuts down on considerable overhead," explains Shane. "V-locity has enabled us to take on value-add projects because we're not wasting budget on hardware and wasting time on troubleshooting."

And all this is happening against a backdrop of healthcare reform: "Every week we comply with new regulations, which adds tremendous administrative overhead," says Shane. "And at the same time we're impacted by decreased rates and projected reductions in payments through 2018."

He concludes, "Healthcare reform is big enough. I couldn't be happier to have a solution that crosses performance problems and hardware costs off my list of things to worry about. V-locity has become *de facto* for us—all VMs and physical servers get it, no question."