DATACORE™

DataCore Stands the Test of Time

KBRwyle provides specialized engineering, scientific, professional and technical services to the U.S. Department of Defense, NASA and a variety of federal agencies.

In 2008, KBRwyle purchased DataCore's software to create an affordable SAN using a standard x86 server rather than a dedicated storage array to host development and test virtual machines. A few months later, KBRwyle decided to virtualize its servers as well. DataCore was used to virtualize existing storage arrays, allowing the reuse of existing storage and simplifying storage management.

In 2013, SAN disk failures led to data loss and storage downtime. KBRwyle sought highly available storage using the existing hardware, and DataCore came to the rescue once again. DataCore SANsymphony™ mirrors data across two separate storage deployments, improving availability.

"Fast forward to 2017, and we're still a DataCore customer," said Ryan Mundie, senior system administrator at KBRwyle. *"DataCore has delivered high availability for our storage infrastructure since 2013. We've had zero downtime due to storage, either planned or unplanned."*

Mundie said storage is available 24X7X365. He's able to update firmware on storage hardware, incorporate new storage (four updates in five years) and re-tier storage capacity—all without storage-related downtime.

"Before we moved to a highly available DataCore deployment, we could only update firmware every three to six months because we had to find a maintenance window big enough for the upgrade," he explained. *"And since it took so long to update the firmware,*

SUMMARY

CHALLENGE

KBRwyle requires high availability of its storage infrastructure so engineers can design and develop solutions for the federal government.

SOLUTION

SANsymphony™

BENEFITS

- Delivers 24X7X365 availability without any storage downtime since 2013

- Simplifies storage management; admin time averages less than 15 minutes per week

- Enables freedom of choice among storage vendors for cost savings

> **We've used DataCore since 2008. We've had zero downtime related to storage because of our highly available DataCore deployment.**
>
> – Ryan Mundie, senior system administrator, KBRwyle

we sometimes had hardware storage issues, but we couldn't work with the storage vendor to resolve them because the firmware was so old. With DataCore, we can do updates anytime. We take one side offline to do the update—data and applications are being served by the other side of the storage mirror—and then we update the other side."

With the move to a highly available DataCore deployment, Mundie said he has seen a dramatic decrease in application performance issues. The secret? DataCore uses a number of high-performance capabilities, such as innovative Parallel I/O technology and caching to ensure that mirroring writes doesn't slow down applications. These performance capabilities speed up I/O.

KBRwyle has also been able to reduce costs with DataCore. For example, DataCore connects the company's fibre channel-based storage arrays to the virtualized hosts via iSCSI, eliminating the need to purchase expensive fibre channel cards for each host.

Mundie said DataCore also increased operating efficiency.

"DataCore couldn't be easier to use," he explained. *"It basically manages itself, which is a huge time saver. We spend only 15 minutes each week going through alerts. Saving time is critical because staff cutbacks decreased our team by 40%, but the number of applications and infrastructure we manage is still the same. Thanks to DataCore, we're still able to meet our SLAs."*

Mundie said DataCore is flexible too. DataCore's unified storage management gives KBRwyle the freedom to choose the most cost-effective storage, which saves the company money and avoids vendor lock-in.

"X-IO has been our storage of choice for several years, but we're not tied to it," Mundie explained. *"We've considered NetApp and Toshiba but stayed with X-IO because it's been the most economical. Having the freedom to purchase economical storage and save money on fibre channel cards saves us thousands of dollars each time we add storage,"* Mundie said.

After purchasing the new storage hardware, Mundie installed it during normal business hours and provisioned the new X-IO storage with zero downtime. DataCore's auto-tiering capability lets him continue to use existing storage in lower tiers so *"hot"* data resides on the newer, high-performing storage while *"cold"* data resides on older storage.

"DataCore gives us everything we need: better availability, high performance, easy management, freedom of choice and cost efficiency," Mundie said.

HOW DATACORE DOES IT

Data storage isn't easy. Data keeps growing, applications require faster performance and new hardware can be complex to integrate. Typical storage environments have multiple devices from several manufacturers, but they can't communicate with each other and must be managed via separate interfaces. They operate in silos and become obsolete in just a few years. Storage vendors often recommend a "rip and replace" strategy, but this benefits the vendor more than the customer.

DataCore software adds a storage management plane between servers and existing storage hardware, unifying management and allowing the total storage capacity to be pooled and auto-tiered according to workload performance requirements. A single set of universal storage services is enabled, eliminating the requirement to purchase the same service, such as compression or deduplication, from each individual storage hardware vendor. DataCore's high availability makes even planned downtime a thing of the past, and best of all, DataCore actually improves the performance of existing storage, lengthening its useful life and giving customers record-breaking performance at a lower cost.

DataCore's approach to high availability is based on an active/active configuration that synchronously mirrors like or unlike devices, and there is no need for manual failover or failback—everything is automated.

DataCore allows customers to preserve and extend the value of past storage investments, avoid storage vendor lock-in and seamlessly integrate the newest technology without disruption or downtime.

To learn more go to http://info.datacore.com/LiveDemo.

For additional information, please visit **datacore.com** or email **info@datacore.com**

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