Mizuno USA Overcomes Data Growth, Replication, Backup, Disaster Recovery, and Connectivity Challenges with Tegile

Mizuno USA's roots stem from its parent company Mizuno Corporation, Inc., established in Osaka, Japan in 1906 by Rihachi Mizuno. Today, Mizuno USA is located in Norcross, GA and continues to manufacture and distribute premium golf, baseball, softball, running and volleyball equipment, apparel and footwear.

Challenge

To find a storage solution that can address company growth while supporting the implemention of a business continuity strategy across two primary data centers that protects all of Mizuno USA's information assets.

Alternatives Evaluated

Dell EqualLogic, Tegile and several other hybrid storage arrays

Results

"With Tegile, our SQL database latency has improved from 15ms to 5ms for a 300% performance boost. Plus we now have replication across our VMware virtualized data centers for a high availability environment protecting all our data"

Chris D'Angelo
Network Administrator at Mizuno USA

Mizuno's IT environment was iSCSI SAN based for 10 years and used Dell EqualLogic storage to support a VMware virtualized server environment. Syscom Technologies, their trusted solution provider partner over the past decade, helped Mizuno select their IT infrastructure and overallstrategy for storage solutions.

The EqualLogic storage met their needs historically, but was not able to address the capacity growth Mizuno needed going forward. It was also limited by a data protection strategy requiring 1-to-1 snapshots and replication capabilities that didn't provide the efficiencies of deduplication and compression to support a cost effective disaster recovery (DR) strategy.

In 2013, Mizuno USA looked at transitioning to a next-generation storage system that could meet future growth requirements and included multi-protocol flexibility. A solution that could support efficient replication and business continuity across two data centers was essential.

"As we evaluated our options for a next generation storage system, the Tegile IntelliFlash architecture really impressed us with its intelligence to automate storage management tasks and provide a hybrid storage solution for accelerated performance and capacity scalability," said Chris D'Angelo, Network Administrator at Mizuno USA. "We have a small IT staff to manage all servers, workstations, storage, networks and applications so simplicity and productivity in managing storage were high on our list of criteria."

Mizuno USA's IT Team did a lot of research comparing vendors and technology which led to an evaluation of hybrid storagesolutions that appeared to make sense from a price/performance perspective. Mizuno looked at the big name storage companies, but these alternatives included a lot of added cost and complexity

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when including multi-protocol capabilities. According to D'Angelo , "When I heard about Tegile IntelliFlash architecture, it sounded intriguing as a self learning system that was more intelligent than other competitive storage vendor products."

One of the criteria that led to the Tegile decision was the growing number of new applications at Mizuno and the IT Team challenges in sizing these applications since it is hard to predict storage needs for every application. An example of this is the Product Information Management (PIM) system that retail clients and partners use to bring new product lines online quickly. The Mizuno product line is expanding thus the size of PIM product images is growing and evitably will consume an increasing amount of storage in the future.

The Mizuno IT environment believed it was necessary to position the business to support and easily manage growth using technology. The network is in the process of migrating from 1GbE to 10GbE in its primary data centers while storage and servers increase by up to 400% over the next few years to support future applications. D'Angelo said, "Applications just need to come up easily and the overall SAN needs to be simple. With Tegile, we don't have to worry about things to manage. Tegile even provided the Professional Services to turnkey the installation and get us up to speed quickly."

Some of the other applications experiencing incredible growth are Mizuno's social media presences on Facebook, Twitter and other online channels utilized for communicating with the ecosystem of customers, vendors, suppliers and partners. Mizuno has found these channels to be very effective in engaging with consumers, releasing brand news, product introductions and company updates. The Mizuno Brand Marketing Team is ramping up exposure to the Mizuno brand leveraging various communications channels from the website to product promotions on social media sites. According to D'Angelo , "We are now doing more and more marketing initatives and advertising campaigns and promotions where rich media content, such as product graphics and photographs, are a central part of the content we present to the marketplace. This consumes a lot of storage. Tegile provides us the perfect storage platform to address these collaborative applications."

Mizuno USA's SQL database applications are business critical so their performance is of primary importance. Mizuno USA is able to leverage the innovation of the Tegile hybrid architecture with flash memory to address SQL database applications that need performance acceleration for the heavy transaction workloads during peak seasonal business spikes, while large capacity hard disk drives (HDDs) effectively address the increasing storage requirements driven by a growing amount of large product image files and historical content maintained online.

SQL performance has increased from 15ms latency on the EqualLogic legacy storage to 5ms latency on the Tegile Zebi Arrays and this 300% performance improvement positions Mizuno for future database growth along with a lot of headroom to deliver consistent throughput to meet the needs of the business for many years to come.

Outside of the Mizuno USA ERP system and Lotus Notes running on a stand alone IBM iSeries server, the rest of the application workload runs in a fully virtualized SAN

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under VMware 5.1 and a consolidated SQL environment with installs of SQL 2005 and 2008. Everything is a virtual machine (VM) on the SAN and utilizing the Tegile storage, plus Mizuno USA is now utilizing NFS for file storage and looking to use CIFS in the future.

IT will transition to a new primary data center later this year with a planned implementation of Cisco UCS for the server and network platform integrated with Tegile storage. Mizuno's IT Team is retiring the current remote primary data center over the next year and a half and migrating all data to a new primary data center location. The IT Team hopes to utilize Tegile's efficient SAN replication to rapidly deploy and test target devices at the new data center using the flexibility to selectively move data sets and volumes based on policies for a smooth transition.

The Cisco UCS reference architecture will introduce the addition of a Fibre Channel protocol environment SAN connected to the Tegile Zebi Storage Arrays. According to D'Angelo , "We are really excited about running SAN and NAS from the same storage using multi-protocols. Tegile provides us the network connection flexibility to run multiple file system protocols and multiple SAN protocols for a true future-proof storage solution. This has real business value for Mizuno as we can now use the same storage longer without upgrades or replacement for an attractive ROI."

Mizuno USA's backup and DR strategy was a big part of the decision to further invest in Tegile infrastructure. Mizuno USA's IT environment utilizes SAN backups mounted to Veeam backup targets. The overall data protection implementation includes full backups once a month, synthetic backups on the weekends and incrementals executed every night which now only takesless than an hour on the Zebi Arrays. Previous to the Tegile implementation, full backups had grown beyond the backup window, but now the backup efficiencies ofTegile deduplication and compression can easily meet the overall backup window.

IT maintains 3 days of snapshots on one set of volumes. Based on the data change rates of specific applications, IT takes snapshots from once a day to four times a day and can easily change the frequency of the snapshots if the applications warrant it in the future. Each of the two backup SANs have 32TB of storage capacity. One site is using a little over 4TB and the other is using 14TB for backups with deduplication and compression optimizing the total capacity utilization. According to D'Angelo , "Our backup and deduplication efficiencies keep improving over time and we can tell each volume what kind of compression to use for even greater capacity optimization."

The overall data protection strategy has been integrated into the MizunoUSA's business continuity strategy. Mizuno USA utilzes WAN point to point high speed connections between a primary data center at the USA headquarters in Norcross (Georgia) and a second remote primary data center site in Georgia. Mizuno USA runs production at both sites and provides users realtime access to either data center operating as two active data centers. As opposed to the legacy EqualLogic storage,where both sites had to be exactly the same configuration with identical amounts of storage that doubled storage capacity requirements, the Tegile system provides an efficient replication model with two mirrored active/active data centers

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that are currently keeping 3 days of replicas and sychronized snapshots between the sites. Tegile deduplication and compression not only saves on storage capacity, but also delivers a faster transfer to the remote site and delivers additional savings from lower network bandwidth requirements.

As for the quality of the support organization, "Syscom Technologies has been a great partner throughout the evaluation process and the full implementation cycle," said D'Angelo . "The Tegile installation and code upgrades have been flawless, without a single product problem since our initial deployment was completed. Plus Tegile's managed services are very helpful and have always provided the answers we need in a timely manner."

"Tegile is a growing emerging vendor that is easy to do business with. Everything is packaged in the product bundle so there aren't any surprises", said D'Angelo . "They have a vision that we trusted and a hybrid product that provides the perfect