CLABBER GIRL CASE STUDY

Introduction

In 1879, Hulman & Co., a wholesale grocery business, located in Terre Haute, Indiana, introduced their manufactured baking powder and in 1899 created the Clabber brand. Today, Clabber Girl® Baking Powder is the No. 1 baking powder sold to consumers, a position that is not surprising given Clabber Girl’s commitment to quality. In 2009, Clabber Girl achieved a level-3 ‘excellent’ rating with the Safe Quality Food (SQF) Institute, which represents a series of initiatives that improved manufacturing practices and operations. Over the years, the Hulman & Co. has expanded its family of businesses, notably in 1945 when Tony Hulman Jr. purchased the run down Indianapolis Motor Speedway with intentions to advertise the Clabber Girl® brand. Through expansion, Clabber Girl Corporation has developed new commercial and wholesale markets in over 40 countries for an extended line of baking ingredients and mixes that include corn starches, cookie mixes, gelatins, puddings, flans and gourmet coffees.

With these expansions, Clabber Girl transitioned from a paper-based business to fully-computerized operations that increased the manageability of the business, but also made the business dependent on keeping complex computer systems up and running.

Challenge

By 2009, the fear of downtime and inefficient data recovery for Clabber Girl was impacting the manageability of the IT environment for Jason Morrison, Clabber Girl Systems Administrator. Recovery of systems relied fully on tape backups of 1.2 terabytes of data spread across 12 servers. Data growth was being accelerated by the graphic design department responsible for branding an increasingly large line of products.

“We conducted a full-scale offsite recovery test from our tapes and the recovery process was not pleasant. It took days. The experience was a clear conclusion we needed to make some significant changes.”

- Jason Morrison, Clabber Girl System Administrator

When the time came to renew maintenance on many of the servers in the data center, Tom Byerley, with sister company Indianapolis Motor Speedway (IMS), considered the costs and benefits of moving forward with a virtualization project to address maintenance costs and application availability. As part of that project, Clabber Girl would also need to implement a shared storage system to enable the availability features of the virtualization platform. Most challenging, the storage would need to be highly available itself, while fitting within the budget.

Solution

Byerley selected VMware vSphere 4 as Clabber Girl’s virtualization platform but found their choices for a storage system less straightforward. After attending a storage seminar and working with EMC on sizing a system with the data redundancy and replication features they wanted, the potential cost impact to their project was disappointing.

“We looked at EMC storage. Even though we didn’t need an extremely large amount of storage, after adding up all the options we wanted, the total cost was approaching $100,000.”

- Jason Morrison, Clabber Girl System Administrator

FAST FACTS

The Clabber Girl Corporation, manufacturer of Clabber Girl Baking Powder, transitioned from an aging physical server infrastructure with direct attached disk to a virtual infrastructure with shared storage. Their choice of a scale-out, unified Scale Computing storage cluster was an essential component to achieve high availability for critical business applications.

- Leading manufacturer of baking goods with worldwide distribution
- Data driven business, from sourcing to shipping; system uptime is critical
- Aging physical server infrastructure virtualized using VMware vSphere 4
- Storage purchase of 12 terabyte M-Series storage cluster with 6 terabytes of usable capacity
- Saved 60 percent in acquisition cost compared to competing solution
- Overall solution cut power consumption by 50 percent based on available run time on APC battery backup unit
Solution - Cont.

Indianapolis Motor Speedway’s Byerley talked to IT partner and Scale Computing reseller LightBound about scale-out storage from Scale Computing.

Every Scale Computing storage cluster is powered by Scale’s own Intelligent Clustered Operating System (ICOS™) technology. A cluster is comprised of three or more storage nodes that present a single storage pool. Unlike traditional scale-up storage, or even other scale-out choices, data to the cluster is striped and mirrored across every disk in every node. With every disk in the cluster contributing to read and write requests in parallel, the performance of a Scale Computing storage cluster increases as more storage nodes are added.

This ability to scale performance alongside capacity made Scale storage a good fit for Clabber Girl’s planned virtual environment. Clabber Girl purchased a VMware® Ready storage cluster consisting of three M-Series storage nodes, each with 4 terabytes of raw capacity for a total of 6 usable terabytes on the cluster. The M-Series storage nodes offer additional processing power and caching for performance intensive environments, yet compared to the EMC solution Morrison had previously researched, Clabber Girl spent 60 percent less to acquire storage from Scale Computing.

Two ESXi hypervisors were connected to the storage cluster over the network using the iSCSI protocol. This configuration allowed Clabber Girl to use VMware Distributed Resource Scheduler (DRS) and High Availability (HA) features to ensure resources were optimally consumed and VMs could be failed over in the event of a server failure.

Implementing vSphere on an iSCSI SAN enabled server availability, but storage availability was also a requirement for Clabber Girl’s environment. Because all data is mirrored to two different storage nodes within the cluster and there is no master node as a single point of failure, a Scale Computing cluster is capable of sustaining data availability in the event of a disk failure, or even an entire node failure. In the event a disk fails, the cluster will automatically heal itself by creating new mirror copies of all the lost content on any free space on the cluster. This process occurs without any need to rebuild data from parity information, a common approach with RAID solutions that can affect storage performance. This automatic healing also happens without any intervention from an administrator.

The included remote replication capabilities of Scale Computing storage was also a contributing factor to Clabber Girl’s decision. Because Clabber Girl’s IT partner LightBound offers off-site hosting resources that use Scale Computing storage, Clabber Girl can plan offsite replication to a LightBound hosting facility for improved disaster recovery capabilities.

““The Scale Computing solution that was chosen saved $50,000 in the Clabber Girl 2011 capital budget.””

- Jason Morrison, Clabber Girl System Administrator

Benefits

Since implementing Scale Computing storage, Clabber Girl has experienced notable streamlining of their IT support services tasks, as well as significant cost savings in IT. Power consumption by the IT department was reduced by 50 percent. Provisioning a new virtual server and the storage it needs is now a process that takes minutes instead of days or weeks.

“The management GUI is about the easiest management tool I’ve used. Creating LUNs is very easy. Provisioning new storage used to require downtime for me to add disks to the physical server. Now I just pop into the Scale GUI, and in five minutes I’m done.”

- Jason Morrison, Clabber Girl System Administrator

While numbers and statistics are good indicators of the project’s success, the most tangible evidence for Jamey Kirsch, Executive Director of IT for Clabber Girl, is that their new infrastructure is aligning IT to business goals. When Kirsch’s team was asked to evaluate the feasibility of implementing an inventory management system from RockySoft Corp. He discovered that the decision to implement a new system was now no longer heavily influenced by IT concerns of capital investments and the related impacts to power consumption and heating and cooling.

“Our analysis for bringing a new business system into the company was so much simpler. The entire computing and storage infrastructure we would need was already in place. A big barrier to adopting new technologies is gone.”

- Jamey Kirsch, Executive Director of IT

In addition to a new inventory management system, Morrison and Kirsch have some additional plans for their new infrastructure. The reality of desktops in a facility that manufactures powder is that powder finds its way into places it should not be, like desktop PCs, where it affects the thermal properties of the hardware, ultimately shortening their lifecycle. Clabber Girl would like to transition to a Virtual Desktop Infrastructure (VDI) to mitigate this problem and reduce desktop support costs. According to Jason Morrison, the project could be started as early as this year, due in part to the cost savings from their Scale Computing purchase.