Grow Financial uses Dell Compellent SANs to improve IT agility

grow financial®
federal credit union

Company	Grow Financial Federal Credit Union
Industry	Banking and Finance
Country	United States
Employees	500
Assets	$1.6 billion
Web site	growfinancial.org

Challenge

Grow Financial Federal Credit Union was spending too much on maintenance for a legacy storage array that was difficult to manage and expensive to upgrade.

Solution

The credit union deployed Dell™ Compellent Storage Center SANs with Dell Fluid Data™ technology. The longtime Dell customer also recently upgraded its Dell PowerEdge™ servers and deployed virtual Dell KACE™ appliances to manage a stable of Dell Vostro™, Dell Dimension™, Dell OptiPlex™, Dell Inspiron™ and Dell Latitude™ client computers dispersed across 19 locations.

Benefits

- 9 months to achieve payback on Dell Compellent SANs
- 2-fold improvement in storage utilization through thin provisioning
- 50% reduction in maintenance costs vs. legacy SAN
- Avoided hiring additional full-time employee by using Dell KACE appliance

Application areas

- Intelligent Data Management
- Server Consolidation
- System Management
- Virtualization

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James Stock, Assistant Vice President of Network Services, Grow Financial Federal Credit Union

When your IT infrastructure is agile, it's ready to support your organization's changing needs, regardless of which industry you work in. For the IT department of Grow Financial Federal Credit Union, agility is a top priority. The Florida credit union offers depository accounts, loans, credit cards, insurance and much more to business- and personal-banking members. "Our main focus is making sure that we're able to provide our members with products and services that make financial sense for them," says James Stock, assistant vice president of network services. "The way the IT team keeps the business moving full-speed ahead is to make sure we're well-positioned to take advantage of any new technologies that will help us provide better service to our members."

Several years ago, the credit union improved its agility by virtualizing most of its servers using VMware vSphere on Dell PowerEdge 2950 servers and EMC SANs. Eventually, the storage arrays began to reduce the virtual infrastructure's flexibility. "Virtual machines grow over time," Stock says. "To expand a volume with our EMC SANs, we had to take the virtual machine down, do a V2V (virtual-to-virtual data transfer), move that over to a new volume that had more space and then bring the machine back up. That process usually took around three hours, and if the volume was really big—say, over a terabyte—it might take up to 13 hours."

Grow Financial had to expand the size of volumes a couple of times per quarter. Microsoft Exchange Server, the credit union's CRM package and its fraud management software, all running on Windows Server 2008 Datacenter, were the biggest drivers of data growth. "We were wasting a lot of time just sitting there babysitting the machine," Stock says. "In addition, we had reached capacity on our SANs and needed to do a forklift upgrade."

Agility achieved
Grow Financial began shopping for storage arrays to replace the three EMC SANs in its primary data center in Tampa

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> *Grow Financial Federal*
> *Credit Union*

Technology at work

Services
Dell™ Compellent Copilot Support

Dell Support Services
– Dell ProSupport™

Solutions
Dell KACE™ VK1000 Virtual Management Appliance

Dell KACE VK2000 Virtual Deployment Appliance

Hardware
Dell Compellent Storage Center SANs with Dell Fluid Data™ architecture

Dell Latitude™, Inspiron™ and Vostro™ laptops

Dell PowerEdge™ R910 servers with Intel® Xeon® processors 7500 series

Dell Vostro™, Dimension™ and OptiPlex™ PCs

Software
Dell Compellent Data Instant Replay

Dell Compellent Data Progression

Dell Compellent Dynamic Capacity

Dell Compellent Enterprise Manager

Dell Compellent Fast Track

Microsoft® Exchange Server Enterprise 2010

VMware® vSphere™ Enterprise Plus

Windows® 7 Professional

Windows Server® 2008 Datacenter Edition

Windows XP Professional

and one EMC SAN at a disaster recovery site in Jacksonville. After evaluating seven or eight vendors, the credit union chose Dell Compellent Storage Center SANs and engaged Dell Compellent partner Syscom Technologies to install them. "We've practically standardized our infrastructure on Dell now," Stock notes. "Aside from our networking gear, almost all of our hardware has a Dell tag on it."

One major factor in the selection of Dell Compellent was scalability. "With the new storage arrays, we can add more storage controllers and more disks if necessary," Stock says. "The SANs offer as much flexibility as we will possibly need over the next few years."

Another feature Grow Financial found compelling is the ability to use different network interfaces as needed. In the Tampa data center, which has a Fibre Channel infrastructure, the credit union deployed SANs with eight-gigabit Fibre Channel connections. But the networking situation in Jacksonville was more complex. "At the time of the SAN purchase, the storage network in our Jacksonville data center was one-gigabit iSCSI, but we were planning to upgrade," Stock says. "A few months after getting the new SANs into production, we upgraded the Jacksonville network to 10 gigabit. We just swapped out the cards on the array, and we had very few configuration changes to make. The process of upgrading the Dell Compellent SAN interface took about three hours."

Payback in only nine months
The Dell Compellent arrays cost less than many of the credit union's other options. "The cost quoted from EMC for a similar SAN was one and a half times more expensive than Dell Compellent," Stock says. And the up-front costs just scratched the surface of the overall savings. "With our legacy SAN, maintenance was getting very expensive. EMC's maintenance costs were about

double what they are with the Dell Compellent arrays," says Stock.

Grow Financial uses Dell Compellent Dynamic Capacity to dramatically reduce the amount of disk space it needs. "When we bought the Dell Compellent SAN, we didn't realize how much disk space thin provisioning could save us," Stock says. "We improved our storage utilization more than two-fold. We went from requiring 25 terabytes of storage capacity with EMC to using about 12 terabytes on our Dell Compellent SAN. Because of thin provisioning through Dell Compellent Dynamic Capacity, we only had to buy one SAN to replace the three EMC arrays in our primary data center. By saving us from purchasing a second and third SAN for our Tampa location and by reducing our storage maintenance costs, the Dell Compellent arrays have already paid for themselves, just nine months after we installed them."

Stock anticipates that Dell Compellent technology will save the credit union even more money over time. By enabling the SAN to automatically move less frequently accessed blocks of data to Tier 3 disk, Dell Compellent Data Progression will allow Grow Financial to purchase less Tier 1 storage than it would otherwise require. "The SATA disk we use for Tier 3 is about 40 percent less expensive than the SAS drives we're using for Tier 1," Stock says. "Currently about 60 percent of our total capacity is Tier 3, and we expect to achieve quite a bit of financial savings in the future because Dell Compellent Data Progression technology will move information we don't use as often to the slower disk."

The credit union uses Dell Compellent Fast Track software to automatically move frequently accessed data to the outer edge of each disk, where read performance is highest. Together, Data Progression and Fast Track have substantially accelerated storage

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performance. "Performance of the Dell Compellent SANs blows away our old EMC SANs," Stock says. "For example, our fraud management routine involves copying a huge database every night from the core system to another system on the SAN. That one job usually took three hours with EMC. Now it takes two hours or less, so we're seeing a performance improvement of nearly 30 percent."

Reclaiming 10-15 staff hours each month

Dell Compellent Enterprise Manager greatly simplifies storage management for Grow Financial. "With our EMC SAN, if you weren't a storage expert, you would have a lot of difficulty managing the array," Stock says. "But anybody could set up a Dell Compellent SAN. Recently, our storage specialist was on vacation, and one of our virtual machines rapidly filled up its volume because of a system issue. From the standpoint of day-to-day operations, I'm hands-off with storage, but I called Dell Compellent Copilot Support. In 10 minutes, they walked me through expanding the volume, getting everything spaced exactly where it should be and even fixing the issue with the virtual machine that caused the problem. The SAN is straightforward to manage, and Dell Compellent Copilot Support is fantastic."

One task that Dell Compellent Enterprise Manager streamlines is expanding the size of a storage volume. "Being able to resize partitions on the fly is saving us a lot of time," Stock says. "Whereas expanding a volume used to take us at least three hours, from both the SAN and machine level, now it literally takes five minutes. That's a fantastic time-saver. And setting up and configuring a new storage partition takes just 5 minutes now, compared with 15 minutes or more

before. Our IT staff is saving between 10 and 15 hours a month by using the Dell Compellent SAN for all disk creation and resizing operations. And because we can resize those systems online, our credit union members are no longer impacted by disk maintenance on member-facing servers."

Reporting is another area in which Enterprise Manager excels. "The reporting was lackluster with EMC," Stock says. "I am responsible for creating a quarterly report showing how well my area is performing, and figuring out how to quantify what was going on with storage used to be a nightmare. With Dell Compellent, not only do I have a beautiful graphical interface, but I can get the reports automatically emailed to me at certain intervals. The information is leagues better, and I didn't have to pay a lot of extra money to get it."

The credit union uses Dell Compellent Data Instant Replay to create space-efficient snapshots of its data volumes. "We're considering using SAN replication in the future, but we haven't yet moved off our legacy system for data protection and disaster recovery," Stock says. "We store the Replays locally for quick file restores, or in case something happens between our nightly backups."

Saving 80% on energy costs, avoiding a new hire

Grow Financial recently upgraded the servers supporting its virtual infrastructure, replacing 11 Dell PowerEdge 2950 servers with 5 Dell PowerEdge R910 servers. "We've been able to quadruple the number of virtual machines we run per physical host, and we've reduced our licensing costs," Stock says. "We're also using roughly 80 percent less power to support our servers."

An assortment of Dell Vostro, Dimension and OptiPlex desktop computers and Dell Latitude, Inspiron and Vostro laptops, running Windows 7 and Windows XP, are spread across the credit union's headquarters and 18 branch locations. The IT team uses a Dell KACE VK2000 Virtual Deployment Appliance to streamline client administration. "When we need to roll out new client machines, a desktop engineer creates an image, then turns the client machines over to our help desk," Stock says. "Between calls, help desk employees plug in each machine and let the image installation run. Last quarter we bought 75 client computers, and they were all ready for deployment within a week. It's so efficient that if someone suspects their machine has a virus, we just reimage it; we don't have to waste time investigating. I've avoided hiring an additional full-time staff member because of the time the Dell KACE appliance has saved us." Grow Financial has also implemented a Dell KACE VK1000 Virtual Management Appliance, as well, to handle IT tickets and asset management, and to automate software deployment.

In addition to buying mostly Dell hardware, Grow Financial purchases VMware and Microsoft licensing through Dell. "One of the things I learned a long time ago is that I should maintain good relationships with my vendors and capitalize on overall spend," Stock says. "We not only receive great prices on everything we purchase from Dell, but we also know that if we have a problem, somebody from Dell will be there to help us. Dell is making smart acquisitions on the storage side, and every time they acquire a storage product, they do a great job of enhancing the product line. I'm very happy with the depth and breadth of the Dell hardware portfolio."

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