

Clayton State University Fed Up with Prior Backup System Installs Veeam and ExaGrid for the Win – Go Lakers!

CUSTOMER SUCCESS STORY



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Roger Poore
Network Engineer

Customer Overview

Clayton State University (CSU) opened in 1969 as Clayton Junior College. Its status has been progressively elevated through the years, and its present name approved in 2005. The campus is located in Morrow, Georgia and spans 192 acres. CSU was ranked by *US News and World Report* as #8 of the top public regional colleges in the South. The university is an NCAA Division II member, with a national championship win by its women's basketball team in 2011.

IT Staff Decides, 'Enough Is Enough!'

When data volumes were more manageable, all of CSU's data fit on one DLT tape. However, the University's data increased over the years to the point that even a large tape library could no longer accommodate it all.

Prior to ExaGrid, CSU had a homegrown solution that consisted of a large file server with a lot of storage connected to a Dell tape library. The data was dumped directly to that file server, and from the file server, it went to tape. The tapes were then taken offsite to a safe deposit box where CSU stored up to six months' worth of backups.

"Our data grew to the point that it became unwieldy, and our backup window was unwieldy to match. A full backup took about 3-1/2 to 4 days, and we were basically running backups 24 hours over 4 days," said Roger Poore, network engineer at CSU.

Not only was CSU's backup window out of control, but retention and disaster recovery suffered as a result. Poore and his team decided, "Enough is enough," and began to search out a viable alternative.

"In addition to ExaGrid, we looked at EMC Data Domain. The Board of Regents in Georgia offers a backup solution so we looked at that as well, but that was pretty expensive and we wanted to host our own system instead of having somebody else do it for us. Overall, ExaGrid was the best solution for us, mainly because of the expandability of the system."



CLAYTON STATE
LAKERS

System Features of Data Dedupe and Shortened Backup Window Reap Great Benefits

CSU purchased three appliances, two of which are set up as one GRID in its primary data center, and the third appliance is at a remote location that the University replicates to.

"We installed Veeam when we switched to ExaGrid. Most of our systems now are virtualized, and Veeam backs up directly to the ExaGrid. We pretty much just set the jobs to run and it all just works. The data deduplication is fantastic – our Veeam dedupe averages 4:1 and the additional ExaGrid dedupe of about 3:1 gives us a total on average of 12:1.

"ExaGrid also allows direct NFS mounts. That allowed us to back up our physical servers since we don't use Veeam on them.

"With the system we used before, sometimes there were kinks in the system, and things didn't always get backed up. With tape, sometimes a tape drive would be dirty, and we'd have to pause backups in order to clean the tape drive." CSU's backups are now much more reliable and backups that used to take four days to run are now done in under a day.

Key Benefits:

- Backups that were running 24 x 4 before ExaGrid are now done in under a day
- Not all data was backed up previously due to issues with tape; all data is now protected
- Combined Veeam-ExaGrid data deduplication averages 12:1
- NFS mounts allows CSU to back up its physical servers in addition to VMs

EXAGRID

The ExaGrid system is easy to install and use and works seamlessly with all of the most frequently used backup applications, so an organization can seamlessly retain their investment in existing applications and processes. In addition, ExaGrid appliances can be used at primary and secondary sites to supplement or eliminate offsite tapes with live data repositories for disaster recovery.

Build-in Scalability Provides for Ease of System Expansion

CSU is currently storing around 45TB and will be adding more data when the University starts backing up its development and test environments. "We'll have to have to purchase some additional ExaGrid appliances to accommodate that, and it's nice that we can just add more appliances to the rack and not have to do a lot of configuration to make them work."

The ExaGrid system can easily scale to accommodate data growth. ExaGrid's GRID computing software makes the system highly scalable, and when plugged into a switch, appliances of any size or age can be mixed and matched in a single GRID system with capacities of up to a 1PB full backup plus retention and an ingest rate of up to 200TB per hour. Once virtualized, they appear as a single system to the backup server, and load balancing of all data across servers is automatic.

Reliable System Backed by Stellar Customer Support

Poore's experience with ExaGrid customer has been very positive. "It doesn't matter when I contact my support engineer, he's typically available to help me right away – it seems as if he drops everything else to help me out – and he really knows what he's doing. The appliances themselves are great, but support is definitely a key factor in staying with ExaGrid."

The ExaGrid system was designed to be easy to set up and maintain, and ExaGrid's industry-leading customer support team is staffed by trained, in-house engineers who are assigned to individual accounts. The system is fully supported, and was designed and manufactured for maximum uptime with redundant, hot-swappable components.

Intelligent Data Protection

ExaGrid's turnkey disk-based backup system combines enterprise SATA/SAS drives with zone-level data deduplication, delivering a disk-based solution that is far more cost effective than simply

backing up to straight disk. ExaGrid's patented zone-level deduplication reduces the disk space needed by a range of 10:1 to 50:1 by storing only the unique bytes across backups instead of redundant data. Adaptive deduplication performs deduplication and replication in parallel with backups while providing full system resources to the backups for the fastest backups and, therefore, the shortest backup window. As data grows, only ExaGrid avoids expanding backup windows by adding full appliances in a GRID. ExaGrid's unique landing zone keeps a full copy of the most recent backup on disk, delivering the fastest restores, VM boots in seconds to minutes, "Instant DR," and fast tape copy. Over time, ExaGrid saves up to 50% in total system costs compared to competitive solutions by avoiding costly "forklift" upgrades.

ExaGrid and Veeam

The combination of ExaGrid's and Veeam's industry-leading virtual server data protection solutions allows customers to utilize Veeam Backup & Replication in VMware, vSphere, and Microsoft Hyper-V virtual environments on ExaGrid's disk-based backup system. This combination provides fast backups and efficient data storage as well as replication to an offsite location for disaster recovery. The ExaGrid system fully leverages Veeam Backup & Replication's built-in backup-to-disk capabilities and ExaGrid's zone-level data deduplication for additional data reduction (and cost reduction) over standard disk solutions. Customers can use Veeam Backup & Replication's built-in source-side deduplication in concert with ExaGrid's disk-based backup system with zone-level deduplication to further shrink backups.

ExaGrid-Veeam Combined Dedupe

Veeam uses the information from VMware and Hyper-V and provides deduplication on a "per-job" basis, finding the matching areas of all the virtual disks within a backup job and using metadata to reduce the overall footprint of the backup data. Veeam also has a "dedupe friendly" compression setting which further reduces the size of the Veeam backups in a way that allows the ExaGrid system to achieve further deduplication. This approach typically achieves a 2:1 deduplication ratio.

ExaGrid is architected from the ground up to protect virtualized environments and provide deduplication as backups are taken. ExaGrid will achieve a 3:1 up to 5:1 additional deduplication rate. The net result is a combined Veeam and ExaGrid deduplication rate of 6:1 upwards to 10:1, which greatly reduces the amount of disk storage required.

About ExaGrid

ExaGrid provides backup storage with a unique landing zone and scale-out architecture. The landing zone provides for the fastest backups, restores and instant VM recoveries. The scale-out architecture includes full appliances in a scalable GRID and provides for a fixed-length backup window as data grows, eliminating expensive forklift upgrades. Learn more at www.exagrid.com.

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