

UCLA Faces Forklift Upgrade, Looks Beyond Data Domain and Installs ExaGrid

CUSTOMER SUCCESS STORY

UCLA

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Jeff Barnes
Senior Development Engineer

Key Benefits:

- ExaGrid installed for a fraction of the cost of a new Data Domain system
- As additional departments are added into the backup structure, system will easily scale to accommodate data
- End goal of eliminating tape campus-wide is within reach
- Easy-to-use GUI reporting provides all information needed, including chargebacks

Customer Overview

The University of California, Los Angeles (UCLA) is a public research university that offers 337 undergraduate and graduate degree programs in a wide range of disciplines. UCLA has approximately 28,000 undergraduate and 12,000 graduate students. The University has the largest enrollment in the State of California and is the most popular university in the U.S. by number of applicants.

UCLA Looks Beyond EMC Data Domain, Avoids Forklift Upgrade

UCLA had a five-year-old EMC Data Domain unit that had reached capacity. Initially, the University looked at replacing the EMC Data Domain unit with a newer system and also considered FalconStor, ExaGrid, and a few other solutions. In the end, the University chose the ExaGrid system based on price and performance.

"We had the EMC Data Domain system for several years and kept adding data to it. When our group merged with another IT group here at UCLA, we decided to combine our backups, and we realized that we needed another solution because the EMC Data Domain unit couldn't scale in terms of capacity or performance," said Jeff Barnes, senior development engineer at UCLA. "We simply couldn't justify the cost of a new EMC Data Domain unit. In fact, the cost of the two-site ExaGrid unit was approximately what we would have paid for three years of maintenance on the EMC Data Domain system," Barnes said.

Scalability Will Enable the ITS Group to Eliminate Tape

Barnes said that UCLA has deployed ExaGrid systems locally to handle primary backup and additional systems in its Berkeley datacenter for disaster recovery. Data is replicated automatically each night between the two locations. ExaGrid's architecture will ensure that the systems can scale to handle increased backup requirements and will enable UCLA to create a network of backup units that all tie into a larger cluster for disaster recovery.



"Our grand plan is to help other departments with their backups and data deduplication by building a large cluster of ExaGrid units in Berkeley that they can connect into," Barnes said. "We're confident that we can easily add appliances to the system to increase capacity and performance over time."

ExaGrid uses a unique configuration, where each appliance contains processing power, memory, bandwidth, as well as disk. When the system needs to expand, additional appliances are attached to the system, bringing with them additional processing power, memory, bandwidth, and disk. This type of configuration allows the system to maintain all the aspects of performance as the amount of data grows, and processing power, memory, and bandwidth are purchased as needed. In addition, as new ExaGrid appliances are added, the ExaGrid automatically load balances available capacity, maintaining a virtual pool of storage that is shared across the system.

UCLA is currently getting data deduplication ratios as high as 17:1, which helps to maximize the amount of data the University can store on the system. The technology also helps to make transmission between sites more efficient.

EXAGRID

“Our end goal is to eliminate tape campus-wide. The University of California system has a very high-speed Internet connection, and with the ExaGrid system, we send only changed data between systems so transmission time is minimized,” he said. “I have quite a bit of bandwidth I can work with between here and Berkeley, but it’s not sensible to be sending the same data back and forth, and we don’t want to use all our bandwidth for replication.”

ExaGrid combines standard compression along with zone-level data deduplication, which stores changes from backup to backup instead of storing full file copies. This unique approach reduces the disk space required by a range of 10:1 to 50:1 or more, delivering unparalleled cost savings and performance. ExaGrid delivers extremely fast backup performance because data is written directly to disk, and data deduplication is performed after the data is stored to reduce data. When a second site is used, the cost savings are even greater because ExaGrid’s zone-level data deduplication technology moves only the changes from backup to backup, requiring minimal WAN bandwidth.

ExaGrid Works with Existing Backup Applications

UCLA IT Services uses the ExaGrid systems in conjunction with Dell vRanger and Veeam for its virtual machines, and EMC NetWorker for physical servers.

“The ExaGrid system works well with our existing backup applications, and it was easy to install. When we initially got the systems, ExaGrid assigned a support engineer. He helped with the setup and brought us up to speed on everything we need to know to operate the system efficiently. We were very happy with the installation experience,” said Barnes. “Our engineer has been very good and really knows what he’s doing.”

Intuitive Interface Makes Managing the System Easier

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.

About ExaGrid

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

“The ExaGrid system’s GUI gives me access to lots of information, and it’s easy to use,” said Barnes. “It will also help to make executing our backup model easier. I have the ability to back up information from multiple internal customers and to filter different machines by IP address. I also have the ability to see exactly how much physical space each client is actually using on the system, which is something I couldn’t do with the EMC Data Domain system. As we get into a chargeback scenario, that will be extremely important.”

Barnes said that the ExaGrid system has lived up to his expectations and beyond. “The ExaGrid system works as advertised and it’s got the price, performance, and scalability we needed. Now, we’re in the position where we can really build out our backup infrastructure,” he said.

ExaGrid and Dell vRanger

Dell’s vRanger solution offers full image-level and differential backups of virtual machines to enable faster, more efficient storage and recovery of virtual machines. ExaGrid’s disk-based backup systems serve as the backup target for these virtual machine images, using high-performance data deduplication to dramatically reduce the disk storage capacity required for backups versus standard disk storage.

ExaGrid and EMC NetWorker

EMC NetWorker provides a complete, flexible and integrated backup and recovery solution for Windows, NetWare, Linux and UNIX environments. For large datacenters or individual departments, EMC NetWorker protects and helps ensure the availability of all critical applications and data. It features the highest levels of hardware support for even the largest devices, innovative support for disk technologies, storage area network (SAN) and network attached storage (NAS) environments and reliable protection of enterprise class databases and messaging systems.

Organizations using NetWorker can look to ExaGrid as an alternative to tape for nightly backups. ExaGrid sits behind existing backup applications, such as NetWorker, providing faster and more reliable backups and restores. In a network running NetWorker, using ExaGrid in place of a tape backup system is as easy as pointing existing backup jobs at a NAS share on the ExaGrid system. Backup jobs are sent directly from the backup application to the ExaGrid for onsite backup to disk.

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