



Los Alamos Takes a New Approach to Backup with ExaGrid, Maximizes Backup Storage and Budget



USA

Key Benefits:

- Adding ExaGrid to environment has introduced deduplication, which maximizes storage
- Scale-out architecture allows for expansion of system as funding permits
- Easy-to-use system and 'outstanding' customer support alleviate stress of backup process

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Scott Parkinson
System Administrator

Customer Overview

Los Alamos National Laboratory, a multidisciplinary research institution engaged in strategic science on behalf of national security, is operated by Los Alamos National Security, LLC, a team composed of Bechtel National, the University of California, BWXT Government Group, and URS, an AECOM company, for the Department of Energy's National Nuclear Security Administration.

Los Alamos enhances national security by ensuring the safety and reliability of the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction, and solving problems related to energy, environment, infrastructure, health, and global security concerns.

Trying Another Approach to Backup

The Weapons Engineering Division of the Los Alamos National Laboratory uses disk arrays for its primary storage and then reuses them as backup storage once the maintenance has expired. While this is a cost-effective strategy, the arrays are already near their end of life and prone to failures.

Scott Parkinson, a system administrator for the Weapons Engineering Division, manages backups of the disk-attached storage using Dell EMC NetWorker.

"The disk arrays I use for backup are old and off maintenance, and are often at a point where drives will fail, so I need to constantly monitor them to add new drives when necessary," said Parkinson. "Sometimes I'll even lose an array and have to restart a backup, so it's definitely time-consuming from a management standpoint."

Parkinson was contacted by a member of the ExaGrid team, and although he wasn't looking for a new solution, he was interested in trying a new approach to backup storage. He asked for an evaluation of an ExaGrid encrypted system and was impressed with the ExaGrid demo unit.

"This was the first appliance that I've ever used here. I put it on our network and ran some security scans on it, and they came through very clean. I was able to just hook it up to NetWorker and start using it," he said.

Scale-Out System is Easy to Install

"Installing the ExaGrid system was incredibly easy. We just brought in the appliance and hooked it up to the network, and it was up and running. The process of adding a second appliance was also as simple as advertised.

"One of the huge benefits of the ExaGrid system is its scalability – being able to build on the existing



system in small chunks, as funding permits. I love being able to just plug in another appliance on the network. With my backup server, I can put it anywhere and add to the system. It doesn't need to be co-located in a certain room," said Parkinson.

Parkinson plans to continue building on the ExaGrid system and hopes to someday establish a DR site. Los Alamos is a federally funded organization, so it is held to an established budget.

"My funding stream usually comes at the end of the year when there is extra money to be spent. ExaGrid provides many features, such as replication, which I haven't been able to utilize yet. The next time I have funding available, I will work on replication with the ExaGrid system."

Cost Savings and Maximized Storage with ExaGrid's Deduplication

Parkinson backs up the Weapons Engineering Division's physical environment on the ExaGrid system in addition to using the disk arrays, which consists of UNIX and Windows servers as well as Oracle and SQL databases. He runs a full backup followed by incrementals.

Los Alamos keeps a year of retention, and Parkinson has found that ExaGrid's deduplication has made backup storage much more efficient. "What had taken up to 100TB of storage on disk arrays takes only a third of the space, about 30TB, on the ExaGrid system. My budget is going to go a lot further using ExaGrid compared to straight disk, and ExaGrid's deduplication is a major factor in the cost savings."

Reliable System with 'Outstanding' Support

Parkinson has found a reliable system in ExaGrid that is easy to manage. "I'm pleased with the ease of use that was designed into this product. It makes my job easier to work with a product that I don't have to fight with, which was something that I've experienced with many products over the years. It's so nice to be backing up to a product that's on maintenance and that is well-protected; I haven't had any kind of hardware failures in the year or two that I've been using ExaGrid, and that helps me sleep better at night."

Parkinson has been impressed with ExaGrid's customer support. "One of the things that I love about ExaGrid is that I was assigned a support engineer as soon as I came on board as a customer, and he has been great. It's so nice to work with the same support person and build a relationship with someone who understands my environment. I don't have to start from scratch or wait for somebody to call me out of the blue, like I do with other vendors. ExaGrid support is outstanding! I've worked with a lot of vendors in different computing platforms, and I've never seen support that's been as good. I wish that all vendors were like ExaGrid."

The ExaGrid system was designed to be easy to set up and operate. ExaGrid's industry-leading level 2 senior support engineers are assigned to individual customers, ensuring they always work with the same engineer. Customers never have to repeat themselves to various support staff, and issues get resolved quickly.

ExaGrid and Dell NetWorker

Dell NetWorker provides a complete, flexible and integrated backup and recovery solution for Windows, NetWare, Linux and UNIX environments. For large datacenters or individual departments, Dell 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 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 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.



About ExaGrid

ExaGrid provides Tiered Backup Storage with a unique disk-cache Landing Zone that enables fastest backups and restores, a Repository Tier that offers the lowest cost for long-term retention and enables ransomware recovery, and scale-out architecture which includes full appliances with up to 2.7PB full backup in a single system.

Learn more at www.exagrid.com.