

MiaSolé's Switch to ExaGrid Improves Data Deduplication, Optimizes Database Backups

CUSTOMER SUCCESS STORY



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Niem Nguyen
IT Manager

Customer Overview

MiaSolé is a producer of lightweight, flexible, and powerful solar cells. Founded in 2004, the company has evolved from a scrappy Silicon Valley startup to the world leader in thin film solar panel efficiency. In December 2012, MiaSolé became a member of the Hanergy family as MiaSolé Hi-Tech Corp.

Time-Consuming Tape Replaced

MiaSolé's IT staff found that backing data up to tape was very time consuming due to the continuous routine of changing out tapes and moving them offsite every few days, which also made data retrieval difficult. "Restoring data was quite a process; it could take up to five tapes from different locations, and after filling out the necessary paperwork, we had to find the data on the correct tape and then finally restore it," said Niem Nguyen, MiaSolé's IT manager.

Nguyen looked into disk-based backup options, including ExaGrid, Exablox, HPE StoreOnce, and a Dell EMC solution. After a demo and careful comparison of the products, the company chose ExaGrid for its storage capacity and ease of use. "Dell EMC and HPE StoreOnce offer high-end storage, but rely more on software to achieve data deduplication. They claim that we can get 15:1 to 25:1 dedupe ratios, but I didn't believe that, because their estimates didn't take into account what type of data we are backing up. ExaGrid offered more raw storage as well as deduplication."

MiaSolé had used both Veeam and Veritas Backup Exec while using tape and continued to use them after switching to ExaGrid. The ExaGrid system works seamlessly with all of the most frequently used backup applications, so an organization can retain its investment in existing applications and processes.

Restores Reduced from Hours to Minutes

MiaSolé's backups are replicated to a second ExaGrid system at its disaster recovery (DR) site. Nguyen backs up the company's data daily, running a full backup of databases and



Exchange servers, daily incrementals of other servers, and a full weekly and monthly backup of all of the company's data.

Much of the company's data consists of Microsoft SQL and Oracle databases. "One of the features I like best is the direct agent functionality, so our SQL data writes directly to the ExaGrid system, making backups and restores from the system incredibly fast." ExaGrid supports Microsoft SQL dumps and Oracle backups without the need to use a backup application, and sends Oracle backups using the RMAN utility set directly to the ExaGrid system.

"Restoring data from tape sometimes took up to 12 hours, depending on the job. Now that we use ExaGrid, we can restore data in minutes—it's so fast!" said Nguyen. ExaGrid writes backups directly to a disk landing zone, avoiding inline processing and ensuring the highest possible backup performance, which results in the shortest backup window. "Adaptive" deduplication performs deduplication and replication in parallel with backups while providing full system resources to the backups for the shortest backup window. Available system cycles are utilized to perform deduplication and offsite replication for an optimal recovery point at the disaster recovery site.

Key Benefits:

- MiaSolé easily expanded ExaGrid system to comply with more stringent retention policy
- ExaGrid-Veeam combined deduplication maximizes storage
- Data restore times took up to 12 hours from tape; now done in minutes
- Databases back up directly to ExaGrid without a backup application
- IT staff saves six hours per week on backup management

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Once complete, the onsite data is protected and immediately available in its full undeduplicated form for fast restores, VM Instant Recoveries, and tape copies while the offsite data is ready for disaster recovery.

Data Deduplication Provides Storage Reduction of up to 40%

Nguyen has been impressed with the data deduplication that the ExaGrid system provides. "The deduplication works great. We see a range of dedupe ratios across our data, and overall it's saved us about 40% of actual disk space! We'd been getting some deduplication from Veeam before, but it's even better since we've added ExaGrid to our environment."

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.

Scalable System Keeps Up with Data Growth Due to Stringent Retention Policy

MiaSolé's legal department established a new retention policy requiring storage of two weeks of dailies, eight weeks of weeklies, and a year of monthlies, resulting in a need for more backup storage. Due to ExaGrid's scale-out architecture, Nguyen simply purchased a new appliance to add to his current system to remain in compliance with the new policy.

ExaGrid's 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 system with capacities of up to a 2PB full backup plus retention and an ingest rate of up to 432TB per hour. Once virtualized, they appear as a single system to the backup server, and load balancing of all data across servers is automatic.

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.

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'Excellent' Customer Support Keeps System Easy to Manage

Nguyen finds that the ExaGrid system requires very little maintenance, especially with the help of his ExaGrid support engineer. "It's easy to manage the ExaGrid system, and the GUI is very intuitive. I'm saving up to six hours a week on managing our backups, compared to when I was using the tape system."

"ExaGrid's customer service is excellent. Whenever I have a question or need help with an issue, I contact my support engineer and he responds quickly. He's very knowledgeable and makes sure our system is running smoothly. Customer service is very important to me, and it's a major reason why I feel comfortable using ExaGrid and expanding our system with new appliances," said Nguyen.

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. ExaGrid fully leverages Veeam's built-in backup-to-disk capabilities, and ExaGrid's zone-level data deduplication provides additional data 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 and Veritas Backup Exec

Veritas Backup Exec provides cost-effective, high-performance, and certified disk-to-disk-to-tape backup and recovery – including continuous data protection for Microsoft Exchange servers, Microsoft SQL servers, file servers, and workstations. Organizations using Veritas Backup Exec can look to ExaGrid as an alternative to tape for nightly backups. ExaGrid sits behind existing backup applications, such as Veritas Backup Exec, providing faster and more reliable backups and restores. In a network running Veritas Backup Exec, 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 backup to disk.



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