

## MemorialCare Heals Backup Problems with ExaGrid

### Customer Overview

MemorialCare™ Medical Centers is a nationally recognized, not-for-profit health system with six hospitals in Los Angeles and Orange County, California. MemorialCare has been identified as one of the top integrated systems in America (Verispan Top 100), a leading hospital organization for technology (Most Wired Hospitals), one of the best governed hospital systems in the U.S. (The Governance Institute) and for having the top leadership team in the country (HealthLeaders). In addition, all of its medical centers received the highest ranking in the Leapfrog National Quality Forum for Safe Practices.

### Around the Clock Backups Stress IT Operations

Backing up data was a continuous process for the IT staff at MemorialCare. With over 150 servers containing patient and business data to protect, backups ran 12 to 18 hours a day and with data vaulting, the total backup window was nearly 24 hours. Full backups of different systems were performed on different days throughout the week, with differential backup jobs performed in between. All in all, MemorialCare consumed 200-300 tapes per week.

“Backing up to tape was problematic in so many ways,” said Jorge Cepeda, network engineer at MemorialCare. “We were performing backups 24 hours a day and the whole process was extremely labor intensive.”

### Losing Exchange Data a Wake Up Call

The IT staff at MemorialCare also experienced difficulty restoring data from tape. Although the staff vaulted most systems and sent copies of the tapes offsite for disaster recovery, some of its systems were too large to vault, leaving only one copy of data from larger systems. MemorialCare’s Exchange server was too large to vault so when it crashed, the IT staff had to recall the tapes from its disaster recovery site. When the tapes arrived, the tape was bad and the staff spent a week attempting to restore the data.

“Ultimately, the exchange data was recovered via Microsoft’s lengthy and painful recovery process. Losing our Exchange data put us in a very difficult situation because the information was so important to the organization,” said Cepeda. “Backups aren’t important until you need them, and losing critical data like our Exchange information made us really think about our whole approach to data protection.”

### Approach to Data De-duplication Key to Choosing ExaGrid

“The IT staff at MemorialCare decided to look at new ways to protect its data, and considered both straight disk and disk-based backup solutions.

“Straight disk without data de-duplication simply wasn’t cost-effective. We looked at several different disk-based backup solutions and chose ExaGrid based on its price, performance, manageability, support and reliability,” said Cepeda. “The ExaGrid system enabled us to significantly reduce our backup window and really makes the whole backup process painless. Also, the fact that we could replicate data between two ExaGrid systems was important because we could act as our own disaster recovery center.”

MemorialCare installed two ExaGrid disk-based backup systems, placing one in its Long Beach facility and another at a co-location facility in Torrance, California. The ExaGrid systems work alongside MemorialCare’s backup application, Symantec/Veritas NetBackup. Eventually, MemorialCare plans to place ExaGrid systems at each of its six hospitals and replicate the data between locations for disaster recovery.

### ExaGrid Provides Faster Backups and Restores, Backups Reduced 75% from 24 Hours to 6 Hours

“Data reduction was very important to us so we spent a lot of time comparing inline and post-process data de-duplication,” said Cepeda. “When we looked at the two approaches in live situations, it was clear to us that ExaGrid’s post-process approach was superior. It makes the system extremely efficient at compressing data and enables us to perform restores very quickly, even on the largest files.”

“The ExaGrid system enabled us to significantly reduce our backup window and really makes the whole backup process painless. Also, the fact that we could replicate data between two ExaGrid systems was important because we could act as our own disaster recovery center.”

Jorge Cepeda  
Network Engineer  
MemorialCare



ExaGrid's byte-level data de-duplication technology 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 de-duplication is performed post-process after the data is stored to reduce data.

MemorialCare now completes its nightly backups in six hours, and no longer needs to vault its data because the backup is replicated onto its second ExaGrid system in Torrance, California.

"Our backups used to be running constantly and now they're down to six hours," said Cepeda. "We also spend very little time managing the ExaGrid. It's nice not to have to fool around with tape libraries or tape drives. I'm amazed at how many streams we can actually run at once. For example, with a tape drive, I could only run 12 backup streams at once. With the ExaGrid, I have been running 80."

### ExaGrid Helps MemorialCare Meet Green Initiative, Streamline Backup Process

MemorialCare is also involved in a green initiative, and has been focusing on reducing datacenter power requirements and rack space. At just 3U, ExaGrid's compact size helps maximize rack space and its 120 volt power supply draws less power than other solutions that require 220 volts. Additionally, ExaGrid's GRID computing software makes the system highly scalable, and when plugged into a switch, different sized configurations can be mixed and matched into a single GRID system with capacities of up to 60TB. Once virtualized, they appear as a single system to the backup server, and load balancing of all data across servers is automatic.

"The ExaGrid fits in nicely with our green initiative. Because the ExaGrid is an appliance, we can scale incrementally. Other vendors required us to purchase racks of equipment with greater power and cooling requirements," said Cepeda.

Looking forward, MemorialCare is working with ExaGrid's customer support team to fine tune its approach to backups, and is planning on installing ExaGrid systems in its other campuses.

"We've been working closely with ExaGrid's support team to streamline our backup processes even further. We have a technician assigned to our account that is always accessible, familiar with our environment and is extremely knowledgeable about backups. It's nice to be able to leverage that expertise," said Cepeda. "We're looking forward to deploying ExaGrid as an enterprise backup system for all of our campuses."

### ExaGrid and NetBackup

Symantec's Veritas NetBackup™ delivers high performance data protection that scales to protect the largest UNIX, Windows, Linux and NetWare environments. With complete protection from remote office to center to vault, NetBackup offers a single console for all backup and recovery operations. Organizations using Veritas NetBackup can look to ExaGrid as an alternative to tape for nightly backups. ExaGrid sits behind existing backup applications, such as NetBackup, providing faster and more reliable backups and restores. In a network running NetBackup, 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.

### Intelligent Data Protection

ExaGrid's turnkey disk-based backup system combines high quality SATA drives with byte-level data de-duplication, delivering a disk-based solution that is more cost effective than standard SATA drives. ExaGrid's byte-level data de-duplication technology stores only the changes from backup to backup instead of storing full file copies, reducing the amount of disk space needed by 10 to 50:1, or more, resulting in a solution that is 25 to 30% the cost of standard SATA drives.

ExaGrid is easy to install and use and works seamlessly with

#### ABOUT EXAGRID

ExaGrid is the leader in cost-effective disk-based backup solutions. A scalable system that works with existing backup applications, ExaGrid is ideal for companies looking to quickly eliminate the hassles of tape backup while reducing their existing backup windows. ExaGrid's innovative approach minimizes the amount of data to be stored by providing standard data compression for the most recent backups along with byte-level data deduplication technology for all previous backups. Customers can deploy ExaGrid at a primary site and at a second site to supplement or eliminate offsite tapes with a live data repository or for disaster recovery.

ExaGrid Systems, Inc.

2000 West Park Drive  
Westborough, MA 01581

1 800.868.6985  
www.ExaGrid.com

