EXAGRID®

City of Aurora Replaces Tape with ExaGrid; Reduces Restores from Days to Minutes

USA

Key Benefits:

- Restoring data from tape took up to three days; now it takes just half an hour!

- Backups no longer exceed window or disrupt production

- ExaGrid support helps identify and resolve issues with ExaGrid system or backup app

- The city expanded its ExaGrid system by trading in its older appliances for newer ones with the assistance of ExaGrid sales and support

"One of the features I love about ExaGrid is its scalability. We will never max out capacity or need a forklift upgrade again, because we can simply add more appliances to the system. Competitors are not able to match that architecture."

Danny Santee
Enterprise Systems Supervisor

Customer Overview

Once a budding frontier town of farmers and ranchers just east of the state's capital, Aurora is Colorado's third-largest city with a diverse population of more than 380,000. At 154 square miles, the city reaches into Arapahoe, Adams, and Douglas counties.

Scalable ExaGrid Solution Chosen to Replace 'Tedious' Tape

Before learning about ExaGrid, the City of Aurora, Colorado had been backing up its data to tape, and the city's IT staff found that restoring data from tape was often a difficult process. "When a user deleted a file, or if a database needed to be restored, we would need to find the tape that the requested data had been stored on," said Danny Santee, the city's enterprise systems supervisor. "Sometimes, the tape would already be offsite by then, so we had to wait for the tape to arrive back onsite, which might require a couple of phone calls to the company that stored tapes for us. The whole process was cumbersome and tedious."

The city decided to switch to disk-based backup and chose ExaGrid, with Commvault as its backup application. "One of the features I love about ExaGrid is its scalability. We will never max out capacity or need a forklift upgrade again because we can simply add more appliances to the system. Competitors are not able to match that architecture," Santee said.

The data that is backed up at the city's production site is replicated to a disaster recovery (DR) site for added data protection. As the city's data has grown, additional ExaGrid appliances have been added to the systems at both sites. "We've traded in and traded up, and swapping out appliances has been an easy process. The expert ExaGrid customer support engineers continue to support the older models and have helped to migrate the data from the traded-in appliances to the new ones," said Santee.

The ExaGrid system can easily scale to accommodate data growth. ExaGrid's software makes the system highly scalable – appliances of any size or age can be mixed and matched in a single system. A single scale-out system can take in up to a 2.7PB full backup plus retention at an ingest rate of up to 488TB per hour.

ExaGrid appliances contain not just disk but also processing power, memory, and bandwidth. When

the system needs to expand, additional appliances are simply added to the existing system. The system scales linearly, maintaining a fixed-length backup window as data grows so customers only pay for what they need, when they need it.

Data is deduplicated into a non-network-facing repository tier with automatic load balancing and global deduplication across all repositories.

Efficient Backups, Quick Restores, and Maximized Storage

Santee backs up the city's 150TB of data with daily incrementals, weekly fulls, and monthly fulls as well as an hourly log backup for its SQL data. After 30 days' retention, the data is copied from the ExaGrid system and archived onto tape.

Santee has found that using ExaGrid has made backups more manageable. "When we were using tape, we had backup windows that were running longer than a 24-hour period, so we had to stagger the jobs and even cut some of them. Since switching to ExaGrid, our backup windows have shrunk and now even making a disk-to-tape copy of our backups no longer affects the production system like it did in the past."

In addition to keeping backup jobs running on schedule, switching to ExaGrid has also greatly improved how quickly data is restored. "The management of restores has been where we've

seen our biggest gain, especially when it comes to restoring SQL data. If an end user accidentally deletes data from a file server, the total time it takes from receiving the ticket request to restoring the data is about half an hour, whereas with tape, it could take up to three days."

According to Santee, ExaGrid's data deduplication has allowed the city to buy less storage. ExaGrid writes backups directly to a disk-cache 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 for a strong recovery point (RPO). As data is being deduplicated to the repository, it can also be replicated to a second ExaGrid site or the public cloud for disaster recovery (DR).

ExaGrid Support Helps Identify and Resolve Issues

Santee appreciates that ExaGrid is easy to manage, but also knows that an ExaGrid support engineer is easy to reach if any issues do arise. "We really appreciate the ExaGrid customer support model of assigning one support engineer to work with us – not every company does that! The engineer knows our site very well, and it's nice not having to speak to a different person every time we call.

"When we upgraded our Commvault software, we ended up having some issues caused by an old dedupe algorithm not working with the new version of the software. All of a sudden, we were running out of space on our ExaGrid system because the data wouldn't dedupe properly, causing the backups to double in size. Our ExaGrid support engineer helped us determine the cause of the issue, and then worked with us to fix it."

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. Customer's never have to repeat themselves to various support staff, and issues get resolved quickly.

ExaGrid and Commvault

The Commvault backup application has a level of data deduplication. ExaGrid can ingest Commvault deduplicated data and increase the level of data deduplication by 3X providing a combined deduplication ratio of 15;1, significantly reducing the amount and cost of storage up front and over time. Instead of performing data at rest encryption in Commvault ExaGrid, performs this function in the disk drives in nanoseconds. This approach provides an increase of 20% to 30% for Commvault environments while greatly reducing storage costs.

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**.