U.S. District Court Virtualizes, Replaces Tape with ExaGrid

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> **PJ Isbell**
> **Programmer Analyst**

Key Benefits:

- ExaGrid system provides seamless integration with Veeam
- Restores are point-and-click, much faster than tape
- Two-week rotation with tape was a 'huge process' and now the time required has been 'reduced to nothing'
- Two additional ExaGrid appliances are planned to support data growth due to the new ERP system

Customer Overview

The United States Courts are an independent, national judiciary providing fair and impartial justice within the jurisdiction conferred by the Constitution and Congress. As an equal branch of government, the Federal judiciary preserves and enhances its core values as the courts meet changing national and local needs. The United States District Court for the Southern District of Alabama is located in Mobile, Alabama.

Virtualization Initiative Led to Backup System Upgrade

The U.S. District Court for the Southern District of Alabama virtualized its infrastructure and decided to make the move from tape to disk-based backup.

"We had been backing up to tape and were dealing with the usual issues, including high failure rates, long backup times, and lots of staff time spent on management. When we virtualized our entire environment, we realized the time was right to improve our backup infrastructure. We consulted with several other courts and discovered that many of them were using ExaGrid, so we decided to take a closer look and installed it based on the strong recommendations we received," said PJ Isbell, programmer analyst for the United States District Court Southern District of Alabama.

Combination of ExaGrid and Veeam Will Deliver Instant VM Recovery

The court purchased a pair of ExaGrid systems to handle primary backup and disaster recovery. The ExaGrid systems currently work along with a legacy backup application, but the court will be moving to Veeam Backup & Replication soon to provide faster restores in the event of a disaster.

"For us, one of the significant improvements we've seen with the ExaGrid is in restore times. It's very easy to go to the ExaGrid, point and click and recover a file, and it's so much easier than dealing with tape," said Isbell. "The addition of Veeam will give us the ability to rapidly recover an entire VM, which is huge in a totally virtualized environment."

ExaGrid and Veeam can instantly recover a VMware virtual machine by running it directly from the ExaGrid appliance in the event that the primary storage VM becomes unavailable. This is possible because of ExaGrid's Landing Zone – a high-speed disk cache on the ExaGrid appliance that retains the most recent backups in complete form. Once the primary storage environment has been brought back to a working state, the VM running on the ExaGrid appliance can then be migrated to primary storage for continued operation.

Less Time Spent on Daily Backup

Isbell said that since installing the ExaGrid system, he spends far less time on daily management, administration, and troubleshooting than he did with tape.

"We had a two-week rotation cycle for the tapes, and I'd have to go in and take all the tapes out, replace them, make sure the job ran correctly, and then sort and store the tapes. It was a huge process. When we virtualized and went to the ExaGrid system for backup, all that labor was suddenly

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reduced to nothing. Now, I get a nightly email to let me know the backups have run correctly and that's it," he said.

Deduplication Reduces Stored Data Over 13:1

Data deduplication reduces the amount of data stored by 13.88:1, according to Isbell. "The ExaGrid system's built-in deduplication technology does a great job at maximizing disk space by reducing the amount of data we store. And because the deduplication happens after the data has hit ExaGrid's landing zone, backups run as quickly as possible," he said.

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 up to 5:1 additional deduplication rate. The net result is a combined Veeam and ExaGrid deduplication rate of upwards to 10:1, which greatly reduces the amount of disk storage required.

"We are implementing a new ERP system in the coming months and we're hoping to acquire two additional ExaGrid systems in our next budget year to handle more data," Byers said. "We really like the flexibility of the system and the fact that we can grow it as our backup demands increase. Also, it's really 'set it and forget it.' We really don't have to even think about our backups anymore."

Responsive Customer Support

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 level 2 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.

"The ExaGrid system is easy to monitor. I get a nightly email telling me that our backups are running, and it includes lots of

pertinent data about the specific jobs, so even on the weekends when I'm not in the office, I can be confident that everything is running smoothly," said Isbell. "Also, we have had a superb experience with support. Our support engineer has always been responsive and helpful whenever I call in, and I know I can count on him to assist whenever the need arises."

Scalable Architecture Ensures Flexible Upgrade Path

ExaGrid's scalable architecture will enable the court to expand the system as its backup needs increase.

All of ExaGrid's appliances contain not just disk but also processing power, memory, and bandwidth. When the system needs to expand, additional appliances are simply attached to the existing system. This type of configuration allows the system to maintain all the aspects of performance as the amount of data grows, with customers paying for what they need when they need it. In addition, as new ExaGrid appliances are added to the existing system, ExaGrid automatically load balances available capacity, maintaining a virtual pool of storage that is shared across the system.

"The ExaGrid system has enabled us to significantly reduce the amount of time we spend on backups and it makes us more confident in our ability to restore and recover data," Isbell said. "It's so nice to be free of tape and its many issues."

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 adaptive 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 Adaptive Deduplication to further shrink backups.

About ExaGrid

ExaGrid provides intelligent hyperconverged storage 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**.