



Franklin University Extends Long-Term Retention and Adds Ransomware Recovery with ExaGrid



USA

Key Benefits:

- Switch to ExaGrid allows longer-term retention for university
- ExaGrid Retention Time-Lock feature key to planning for ransomware vulnerability
- ExaGrid deduplication provides savings on storage without impact on backup performance
- Backup windows significantly reduced with 'flawless' restore performance

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Josh Brandon

Virtualization & Storage Engineer

Customer Overview

Since 1902, Franklin University has been the place where adult learners can finish their degrees faster. From its Main Campus in downtown Columbus, Ohio, to its convenient online classes, this is the place where working adults learn, prepare and achieve. As one of the largest private universities in Ohio, you can find nearly 45,000 Franklin alumni across the country and around the world serving the communities in which they live and work. Franklin University provides high quality, relevant education enabling the broadest possible community of learners to achieve their goals and enrich the world.

ExaGrid Replaces NAS Appliances, Allows for Longer-Term Retention

The IT team at Franklin University had been backing up data to NAS storage servers using Veeam, and using NAS storage appliances as repositories. Josh Brandon, the university's virtualization and storage engineer, had done an assessment of the backup environment in terms of ransomware vulnerability and decided to update the NAS storage with a new backup storage solution. In addition, the university needed a storage solution that offered longer-term retention.

When researching the different backup storage options, Brandon found it was difficult to find a solution that met the requirements the university needed and also worked within the budget. "As I looked at what was available in the market, there seemed to be two buckets in which everything fell, neither of which were really usable: there were the flagship products that could do everything and had all kinds of solutions bolted on, and those were hyper-expensive and way out of budget. In the other bucket, there were the small and medium business solutions, not really capable of doing everything I need, but that were definitely within budget," he said.

"During my research, I reached out to the ExaGrid team about Tiered Backup Storage, and learned that not only would an ExaGrid system extend our retention, but the Retention Time-Lock feature would also allow for recovering from a ransomware attack.

"My initial goal was just to extend retention, and switching to ExaGrid allowed us to extend retention, add a layer of ransomware protection by being able to recover our data if necessary, and add another layer of deduplication. This particular storage solution was perfect for what I needed, and I don't say that lightly," said Brandon.



ExaGrid's Retention Time-Lock Feature Key to Proposal

In choosing a new solution, assessing the university's ransomware vulnerability and strengthening its preparation in case of an attack was top of mind. "I'm very aware that data backup is one of the last layers of defense against a ransomware attack, and I like having multiple safety nets because you never know when you might need them," said Brandon.

"As part of my proposal for a new backup storage solution, I listed out universities that were hit with ransomware attacks in recent years and how they dealt with the problem. By and large, the way those universities reacted to a ransomware attack was just to turn everything off. When I presented my proposal, I wanted to make our team aware of the risk and the reality of what's happening. I pointed out that one of the universities had to shut everything off the week before classes started. I saw testimonials from students at that university who were worried whether classes were going to run and if they should go somewhere else, which is a black eye in terms of public relations. It just creates an environment of chaos, and that's the last thing any business wants," he said.

Once the ExaGrid Tiered Backup Storage system was installed at Franklin University, one of the first things that Brandon did was to set up the Retention Time-Lock (RTL) policy and do an RTL recovery test to simulate what an actual attack would be like, and then document it for the IT team in case they needed to use it in the future. "The test went well," he said "I created a test share and then backed up data for several days and then deleted half of the backups to simulate an attack, and I saw that the backups that I had deleted in Veeam were actually still there in the ExaGrid retention Repository Tier, and then we ran some commands to actually restore the data as a new share. I like that there was a suggestion to do away with the existing share because if that were infected and we tried to 'perform surgery' on it, we may or may not be successful. That was a learning moment for me because it now we can really plan and we will know what to do thanks to the test."



ExaGrid appliances have a network-facing disk-cache Landing Zone Tier where the most recent backups are stored in an unduplicated format, for fast backup and restore performance. Data is deduplicated into a non-network-facing tier called the repository where deduplicated data is stored for longer-term retention. The combination of a non-network-facing tier (virtual air gap) plus delayed deletes with ExaGrid's Retention Time-Lock feature, and immutable data objects, guards against the backup data being deleted or encrypted.

Deduplication Benefits Without Impacts on Backup Performance

Brandon backs up the university's 75TB of data on a daily and monthly basis, keeping a retention of 30 daily and three monthly full backups available for quick recovery if necessary. The data consists of VMs, SQL databases, and some unstructured file data.

Since switching to ExaGrid, Brandon has been able to reduce 20 backup jobs down to eight. "I combined everything into more efficient jobs, and all of my backup jobs complete within their backup window, outside of core business hours. My backup window is 8:00 p.m. to 8:00 a.m., and all of my backups tend to finish by 2:00 a.m. I'm well within my backup window, with a significant reduction in time," he said.

"I have tested restores and performed production restores, both of which have gone flawlessly. I think the ExaGrid system is doing a fantastic job," said Brandon.

Brandon was initially uneasy with the idea of ExaGrid-Veeam combined deduplication, especially as the backup industry tends to tout the benefits of deduplication without addressing the performance issues it can cause. "Deduplication has slowly become more of a standard and a norm. A concern I had when I first heard about ExaGrid-Veeam combined dedupe was the CPU impact on having to rehydrate twice because that's been the bane of deduplication—its impact on CPU cycles. Once the ExaGrid team explained the Adaptive Deduplication process, I realized it allows for significant savings on space without the need for rehydration," he said.

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 so that an RTO and RPO can be easily met. Available system cycles are utilized to perform deduplication and offsite replication for an optimal recovery point at the disaster recovery site.

ExaGrid is Easy to Manage, with Responsive Support

Brandon appreciates how easy the ExaGrid system is to use and manage. "ExaGrid doesn't need a whole lot of hand-holding and feeding. It just works. The initial install and configuration were both very simple, while still having a lot of robust functionality and features. I've deployed other systems where it's significantly more complicated, and ExaGrid simply isn't that," he said.

"One notable difference with the ExaGrid is having an assigned support engineer. I've spoken with my support engineer a few times since that I've had the appliance, and she's always been incredibly responsive and knowledgeable and would resolve any questions or support issues I have. She was actually the person who walked me through testing out Retention Time-Lock and all the questions I had. It's great to work with the same person who is gaining more and more familiarity with my environment," said Brandon.

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.

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.