NASUNI®

Case Study:
The Field Museum

Unpredictable File Growth & Rising Costs: Why The Field Museum Traded Storage Hardware for Enterprise File Services

The Field Museum, a leading exhibitor and an active scientific research institution, is in the process of digitizing its entire collection of 30 million items. This long-term project, along with new and ongoing research efforts, has been driving a steady but unpredictable increase in file storage volume. For a nonprofit with a small IT staff, expanding capacity through hardware was not a sustainable approach. By partnering with Nasuni, The Field Museum upgraded to unlimited, on-demand scalability, improved its data protection and saved 60%.

Drivers

- Massive digitization project
- Rising file storage costs
- Unpredictable spikes in required capacity
- Expensive data protection

Requirements

- Unlimited, cost-effective file storage
- Flexible, on-demand scalability
- Fast access to files on a 24/7 basis
- Strong, easy-to-manage data protection

Nasuni Solution

- Unlimited, on-demand scalability
- High-performance file access
- Built-in data protection with 15-min RTO
- 60% reduction in file storage costs

The Field Museum

Founded in 1893, The Field Museum is both a major public exhibit space and a nonprofit scientific research institution. Based in Chicago, the museum stores, maintains and continually adds to a collection of 30 million items. These pieces range from physical fossil specimens to digital copies of the genomes of endangered species. They are at the core of the museum's mission to maintain a scientific record of life on our planet.

Recently, The Field Museum launched a project to digitize this entire collection. Combined with ongoing research efforts to sequence the genomes of various species, this has led to a steady increase in file storage volume. IT had also been noticing a larger shift away from structured and virtual machine data to files and other unstructured data. Suddenly, hundreds of thousands of high-resolution image files had to be stored on the network, plus DNA sequencing data and traditional office documents. Yet the museum was relying on a traditional Storage Area Network (SAN) that had been optimized for database storage.

"We identified that staying with a traditional SAN was going to become a problem for us."

— Rob Zschernitz, Chief Technology Officer

Limited by Storage Hardware

File growth was also impossible to predict since much of the nonprofit's research is grant-funded. Often, the scientists involved don't know whether they'll need added file storage until they secure the necessary funding. Then IT has to provision enough capacity within weeks or even days.

Yet the IT group didn't want to be forced into purchasing excess hardware. "We identified that staying with a traditional SAN was going to become a problem for us, from an agility standpoint more than anything else, but from a whole bunch of different angles," says Rob Zschernitz, Chief Technology Officer. "So we started looking at enterprise solutions that would scale very, very quickly."

Cumbersome, Expensive Data Protection

The Field Museum did not merely have a scale problem. Maintaining and protecting its digital scientific data is critical, and the organization's data protection plan had become too cumbersome, time-consuming and expensive. Originally, IT was backing up to tape drives and a tape library. The group switched to disk-to-disk backup appliances, but the expense was growing, and IT was concerned that it would take far too long to recover data in the event of a disaster.

The IT group began evaluating solutions that were geared towards storing files, but could offer a stronger, more efficient data protection plan as well. A traditional forklift upgrade was out of the question—any transition had to be smooth. Scientists from around the world travel to The Field Museum, and IT needs to ensure that data is accessible to them at all times. There is no traditional maintenance window.

Nasuni Enterprise File Services

After evaluating several cloud-related options, The Field Museum began working with SHI, the organization's IT solutions provider, and quickly moved ahead with Nasuni. Today, The Field Museum enjoys:

Unlimited Capacity

Nasuni's cloud-native file system, UniFS®, securely links local storage to the cloud, eliminating the need to buy excess hardware. The organization has reduced the footprint of its data center, freeing space for other needs, such as exhibitions.

On-Demand Scalability

In the past, The Field Museum struggled to provision capacity fast enough for its research groups. With Nasuni, expanding storage or setting up a new, volume is fast and simple.

Simplified Management

Nasuni is also designed to reduce IT workload. "It's all very streamlined, very simple, single-pane-of-glass management, which is key with us having a small IT team," according to Zschernitz.

High-Performance File Access

While the cloud provides scale, Nasuni caching algorithms keep new and frequently accessed files in local storage. End users have praised IT since the switch to Nasuni—they're enjoying faster file access than with the SAN.

Continuous Versioning

Although copies of frequently accessed files reside in the local cache, the gold copy of every file is maintained in the cloud, along with multiple georedundant copies. This gold copy can be updated as often as every minute, resulting in unprecedented RTOs and RPOs. To Zschernitz and his IT team, this is invaluable: "We have the peace of mind of knowing that we can recover data at any point, at any time, in a way that we couldn't before."

> **"When we moved all the data to Nasuni, our clientele inside the museum noted that access to that data was actually happening faster."**

Agility, Efficiency & Cost Savings

Nasuni delivered all these benefits without requiring massive hardware investments, disrupting the workflow of the research staff or adding to IT cycles. Overall, The Field Museum estimates that Nasuni is saving the organization:

- 60% on file storage costs
- 50% on storage management time

Thanks to this overall combination of savings and strategic benefits, Nasuni has become a key part of The Field Museum's efforts to preserve and update a digital record of life on Earth.