

© CJ Walker

**INDUSTRY:**

AEC

**CLOUD FILE STORAGE:**

Nasuni

**OBJECT STORAGE:**

Amazon S3

**USE CASES:**

File Server Consolidation;  
Backup/DR to the Cloud;  
Multi-site Collaboration;  
Data Center Consolidation;  
Business Continuity

**BENEFITS:**

Significant cost savings on file storage hardware; unlimited, on-demand file server capacity; accelerated deployment of large projects; IT freed from mundane tasks; faster, simpler disaster recoveries

## Civil Engineering Firm Cuts Capital Costs by 50% and Centralizes File Data with Nasuni® and AWS

**Kimley-Horn turns to Nasuni cloud file storage to simplify data protection, shrink its hardware footprint, and support engineering collaboration**

One of the nation's premier planning, engineering, and design consulting firms, Kimley-Horn has more than 4,000 staff members in nearly 100 U.S. offices. The company offers services in a wide range of disciplines, leading projects in public infrastructure and private development.

The engineers, planners, and environmental scientists at Kimley-Horn are a major

reason 90% of the firm's business comes from repeat clients. The company believes that hiring top talent, then giving these individuals the tools and support they need, is what drives its success. That makes IT's job incredibly important, as the team needs to ensure that its colleagues have what they need to work efficiently and support the company's larger strategic goals.

The engineers, planners, and environmental scientists at Kimley-Horn are a major reason 90% of the firm's business comes from repeat clients.

For a highly distributed organization like Kimley-Horn, this was an enormous challenge — especially with regard to files. “Our file data was siloed in 80+ locations across the country, stuck in these islands of direct-attached storage,” explains Chris Stetson, Vice President, IT Infrastructure at Kimley-Horn. “Every time we came up with an exciting idea that would help the business, we realized, well, that will only work if we have the data in one place. Our siloed file data was always the roadblock.”

Then Kimley-Horn discovered Nasuni cloud file storage.

### **Nasuni and AWS**

Instead of maintaining file storage hardware at each site, Kimley-Horn now relies on Nasuni Edge Appliances, lightweight virtual machines that cache copies of frequently accessed files locally for fast access. At the same time, Nasuni ensures all file data scales in unlimited object storage. The back-end object storage Kimley-Horn chose for Nasuni is Amazon Simple Storage Service (S3) from Amazon Web Services (AWS).

With the combination of Nasuni and Amazon S3, the company gains unlimited, cost-effective file server capacity, plus georedundant data protection. With several offices in hurricane-prone areas in Texas and Florida, Kimley-Horn regarded this as essential. “We took the extra step of replicating our data in one AWS region to another AWS region for that once-in-a-lifetime event,” says Stetson. “I feel more comfortable having those different copies of our data separated by thousands of miles.”

Together, Nasuni and AWS give Kimley-Horn many new advantages, including:

#### **Flexible, On-demand Capacity**

Kimley-Horn no longer has to over-purchase storage to account for unexpected file data growth. The access to unlimited, on-demand capacity in the cloud could allow the firm to consolidate to a single data center.

“Nasuni decreases the capital costs in our offices because we don’t have to buy so much excess capacity.”

— John Ferguson, SAN Manager & Virtualization Engineer at Kimley-Horn

#### **50% Lower Capital Costs**

In the past, the firm had to provision at least 10TB of file storage capacity per office on Dell or HPE servers with large Direct-Attached Storage (DAS) arrays. IT was forced to buy as much capacity as possible because it would have been too difficult to expand on-demand if file data grew unexpectedly. But the average office was typically using only 40% to 50% of its purchased file storage capacity. The servers also needed to support the local VDI deployment and ensure fast file access for non-local users.

Nasuni simplifies this infrastructure. Today, Kimley-Horn has a standardized edge configuration for all its remote offices. Nasuni Edge Appliance VMs, deployed on less expensive servers, drastically reduce the need for local storage. Kimley-Horn can standardize on a smaller server with a single CPU, vastly reduced DAS footprint and less RAM – reducing the cost of each server by around 50%. And those non-local users can access a DFS namespace linked to a Nasuni Edge Appliance for fast access.

“Nasuni decreases the capital costs in our offices because we don’t have to buy so much excess capacity,” says SAN Manager & Virtualization Engineer John Ferguson. “It simplifies our purchasing, lowers our costs, and simplifies our support, since we know that every office can have pretty much the same model server and cache underneath the Nasuni VMs.”

The access to unlimited, on-demand capacity in the cloud could allow Kimley-Horn to consolidate to a single data center.

*Instead of maintaining file storage hardware at each site, Kimley-Horn now relies on Nasuni Edge Appliances, lightweight virtual machines that cache copies of frequently accessed files locally for fast access.*

*Nasuni Edge Appliance VMs, deployed on less expensive servers, drastically reduce the need for local storage.*

### Smaller Data Center Footprint

Nasuni allows the firm to reduce the file storage footprint in its two data centers. Nasuni Edge Appliance VMs backed by Pure Storage and Tintri arrays cache copies of just the frequently accessed files in each data center, reducing the amount of local flash storage needed to serve files, and ensuring that file storage scales in AWS instead of crowding high-performance hardware.

### Fast, Efficient Collaboration

The firm operates as a single profit center, so when one office has too much work, and another has extra bandwidth, the company wants to be able to utilize those engineers. For major projects, Kimley-Horn also needs to leverage its top talent, no matter where those engineers sit. This was challenging with its previous infrastructure, but high-speed file synchronization and Nasuni Global File Lock® technology allow colleagues in different offices to collaborate quickly on shared files without version conflicts — even the large, complex CAD models that strain or break existing file sharing and collaboration solutions.

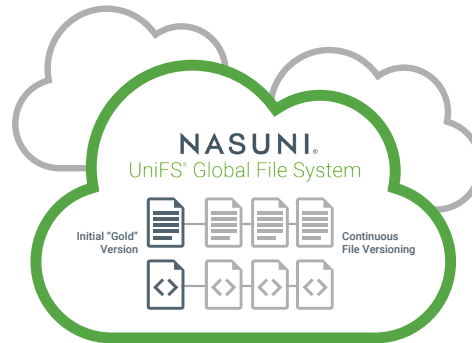
“We work in AutoCAD, and you can’t work over the wire on these files,” says Stetson. “Nasuni gives us the option to collaborate through the caching appliances across different locations and bring the data to our engineers, giving them local performance, even though the project file’s real home in Amazon S3 might be thousands of miles away. This is especially important now that business travel has been minimized due to the pandemic.”

### Accelerated Project Deployment

Enhanced collaboration allows the company to get projects for its largest clients off the ground faster. “We’ve accelerated deployments for some nationwide projects, where five offices at a time are having to work on the same project,” says Stetson. “The engineers really like the fast collaboration with Nasuni, and having only one copy of the data and not several spread across the country.”

### Simpler Data Protection

With Nasuni Continuous File Versioning®, a complete, immutable version history of every file is automatically and securely stored in the cloud. This eliminates the need for separate backup while improving recovery points and recovery times. Plus, it’s hands off.



### Less Plate Spinning, More Strategic Value

For IT, the simplicity of the Nasuni platform means less time managing storage, backup, VDI environments, and more. “If we can free up IT time from essentially keeping all these plates spinning, then our team can generate more value by focusing on more strategic work,” says Ferguson. “In the past we had six people maintaining file servers. A whole other team was just managing virtual desktops. Now that our file data is in Nasuni, these people can do other things for the company.”

“Nasuni gives us the option to collaborate through the caching appliances across different locations and bring the data to our engineers, giving them local performance, even though the project file’s real home in Amazon S3 might be thousands of miles away.”

— Chris Stetson, Vice President,  
IT Infrastructure at Kimley-Horn

*High-speed file synchronization and Nasuni Global File Lock® technology allow colleagues in different offices to collaborate quickly on shared files without version conflicts — even the large, complex CAD models that strain or break existing file sharing and collaboration solutions.*



“In the past we had six people maintaining file servers. A whole other team was just managing virtual desktops. Now that our file data is in Nasuni, these people can do other things for the company.”

—John Ferguson, SAN Manager &  
Virtualization Engineer at Kimley-Horn

### Faster Disaster Recovery

Previously, when an office suffered a power outage or another disaster, IT had to work with the local engineers to determine which files and folders had to be restored first. By the time IT had spent several hours working, the power would often be back on already. Nasuni allows Kimley-Horn to recover almost immediately. “Nasuni has already helped us with several small-scale outages,” says Stetson. “John was able to handle one of them within 15 minutes and provide everything the engineers needed. They were working from home and didn’t even know anything occurred.”

### Work-From-Home Support

Although the pandemic struck early in the company’s deployment in 2020, Nasuni did give Kimley-Horn more flexibility in terms of servicing its remote users. If too many users in one location were overwhelming the local virtual desktop infrastructure, for example, IT could point them to another office. Because file data is consolidated in AWS by Nasuni, with Nasuni Edge Appliances providing access points in all locations, file storage didn’t need to move.

### The Value of Consolidation

Ultimately, Nasuni is allowing IT to give the firm’s engineers the tools they need to excel. “Nasuni has addressed the root of our problems by consolidating all of our file servers in the cloud,” says Ferguson. “The collaboration capability is big for us, but Nasuni also replaces complex multi-tiered backups and the need to do forklift storage upgrades. Those are big value adds. All that end-point maintenance and worry and monitoring around file storage capacity is gone because we’ve got our file data in Nasuni and AWS.”

### About Nasuni

Nasuni is a file storage platform built for the cloud, powered by the world’s only global file system, UniFS®. Nasuni consolidates Network Attached Storage (NAS) and file server silos in cloud storage, delivering infinite scale, built-in backup, global file sharing, and local file server performance, all at half the cost of traditional file infrastructures. The Nasuni software-as-a-service platform is most often used for NAS consolidation; backup and recovery modernization; multi-site file sharing; and rapid, infrastructure-free disaster recovery, while also serving as a foundation for data analytics and multi-cloud IT initiatives.



One Marina Park Drive  
Boston, Massachusetts 02210  
United States  
www.nasuni.com  
SAL-0156 10/20