ESG Economic Value Validation

Analyzing the Economic Benefits of Consolidating File Storage in the Cloud with Nasuni Enterprise File Services: Cushman & Wakefield

By Kerry Dolan, Senior IT Validation Analyst; and Brian Garrett, Vice President, Validation Services
June 2018

Executive Summary

As file data continues to grow and collaboration requirements across businesses increase, traditional on-premises storage and backup solutions can become expensive and contribute to the problem of data siloes. Nasuni Enterprise File Services is a platform for unstructured data that works with public cloud or on-premises object storage. It provides unlimited capacity and data protection using the scalability of the cloud, and collaboration through global file locking. Its hybrid design also provides high performance access to frequently accessed files, fast file restores, and high speed files synchronization.

This ESG economic validation analyzes the types of cost savings that Cushman & Wakefield, a global real estate management firm, is experiencing since it implemented Nasuni and Azure object storage after a three-company merger. With the EMEA phase of its global consolidation and Nasuni rollout partially complete, Cushman & Wakefield has already begun to realize significant savings in storage and data protection capital costs and operational costs, as well as user and IT productivity increases. Another study will be conducted once the North American rollout is complete, at which time additional quantitative details will be presented.

> *"We are getting big savings by eliminating on-premises storage and data protection infrastructure and simplifying management."*
>
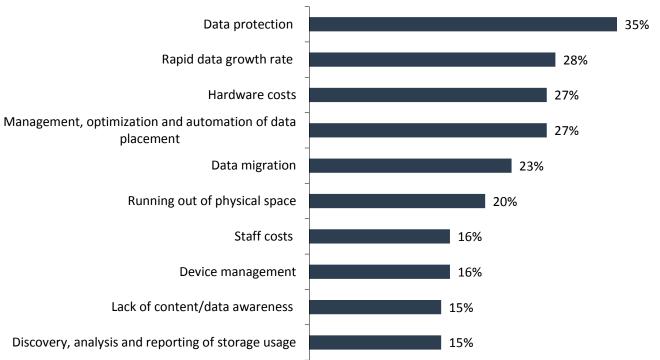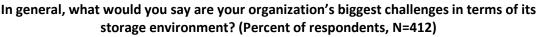> *- **Global Technology Solutions Manager, Cushman & Wakefield***

Introduction

This ESG economic analysis focuses on real-world experiences of Nasuni customer Cushman & Wakefield, one of the world's largest privately held commercial real estate services firms, with 400+ locations worldwide and 45,000+ employees. After a recent merger of three companies, Cushman & Wakefield decided to modernize its file storage with a cloud solution. The goal was to improve client service, reduce costs, and improve efficiency and collaboration as part of an overall process of digital transformation. The details in this report are based on the first phase of Cushman & Wakefield's Nasuni rollout, which targeted the company's Europe, Middle East, and Africa (EMEA) offices.

Challenges

Storage challenges continue to drive up costs. Organizations that participated in ESG research cited data protection, rapid data growth, and hardware costs as their top storage challenges (see Figure 1).[1] These items are related; the more data grows, the higher the cost to store and protect it. Managing and migrating data, having enough capacity, and staffing costs were also cited challenges, all of which force IT administrators to spend more time on storage management. Taken together, these challenges result in higher costs and lower productivity for both IT and users. For most organizations, file data is the fastest growing data, as users create and consume more files, video, and images from multiple devices and want to share them broadly.

Figure 1. Top Ten European Storage Environment Challenges

In general, what would you say are your organization's biggest challenges in terms of its storage environment? (Percent of respondents, N=412)

Challenge	Percent
Data protection	35%
Rapid data growth rate	28%
Hardware costs	27%
Management, optimization and automation of data placement	27%
Data migration	23%
Running out of physical space	20%
Staff costs	16%
Device management	16%
Lack of content/data awareness	15%
Discovery, analysis and reporting of storage usage	15%

Source: Enterprise Strategy Group

---

[1] Source: ESG Research Survey, *2017 European Storage Trends Survey*, June 2017. Related research revealed similar results with North American respondents.

Solution: Nasuni Enterprise File Services

Nasuni Enterprise File Services is an unstructured data platform designed to leverage the low cost and unlimited scalability of private and public cloud object storage. It consolidates many of the capabilities of traditional NAS infrastructure, including primary and secondary file storage, backup, archive, and disaster recovery, while offering more advanced capabilities in the areas of global file access and multi-site file synchronization. This highly scalable solution is based on Nasuni's global file system (UniFS), which stores all metadata and files in object storage (cloud or private) instead of local controllers.

Users can access files and directories from any location through Nasuni Edge Appliances, which cache the most frequently used data locally for optimal performance. These appliances can be VMs on existing virtual infrastructure or physical appliances supplied by Nasuni; they integrate with AD and LDAP for authentication, and support standard CIFS and NFS protocols for file access. They cache only active files from object storage, reducing on-premises hardware requirements.

Nasuni continuous file versioning captures file changes as they occur, creating an infinite history of each file in object storage and delivering ongoing data protection with granular recovery points. Users can take advantage of self-service restore of previous versions.

By leveraging object storage, files stored in Nasuni are automatically replicated in multiple, geo-redundant locations, eliminating the need for traditional DR. Data is encrypted with customer-controlled keys, compressed, and deduped before being sent to the cloud. Users can still access files from any location through the Nasuni edge appliances, minimizing cloud egress fees and providing file access at local LAN speeds.

Nasuni's cloud architecture uses Internet bandwidth to synchronize the fragments of changed files to all edge appliances, offloading traffic from the private WAN. Nasuni's global volume manager stores each change in object storage before propagating it to the other appliances. Nasuni global file lock, also a cloud service, prevents more than one writer anywhere in the world from editing the same file, enabling collaboration without version conflict.

Nasuni enables customers to:

- Consolidate file server storage for central, remote, and branch offices in the cloud.

- Provide high performance file access, collaboration, and synchronization.

- Eliminate separate investments in file backup technology, services, and licenses.

- Restore lost, corrupted, or ransomware-locked files in minutes.

- Deliver unlimited file storage capacity with non-disruptive scalability.

- Reduce capital and operational costs of primary storage, backup, archive, and DR.

ESG Economic Value Audit: Cushman & Wakefield

ESG gathered information about Cushman & Wakefield's experiences with Nasuni from interviews with the company's senior IT managers.[2] Cushman & Wakefield recently grew via a three-company merger; the IT strategy for consolidating these firms included standardizing files services with a cloud-based solution from Nasuni and Azure object storage. The

---

[2] ESG previously prepared a detailed report quantifying the value of Nasuni Enterprise File services, including capital, operational, and end-user productivity savings, with an extensive TCO model. https://info.nasuni.com/resource/quantifying-the-value-of-nasuni-enterprise-file-services

initial Nasuni deployment involved a technology refresh/office consolidation project across Cushman & Wakefield's offices in EMEA, where part of the challenge was dealing with a variety of office sizes and types.

At the time of this audit, the transition to Nasuni had been completed in 25 of the roughly 133 EMEA locations that provide 5,000 EMEA employees access to Nasuni's global file system. Most offices use virtual Nasuni appliances to cache active files; the non-virtualized offices use Nasuni physical caching appliances. Nasuni caching appliances are typically right-sized to provide just enough storage to cache active files for each office; as a result, they are 80% smaller on average than the full-sized file servers they replace. At the time of this report, 100 TBs of the EMEA region's file data had been moved into Nasuni and Azure, about half the EMEA region's total amount.

For Cushman & Wakefield EMEA offices, Nasuni is delivering savings in three key areas:

- Capital costs.

- Operational costs.

- Improved business productivity for IT and users.

Capital Cost Savings

Cushman & Wakefield is seeing significant savings by reducing the infrastructure needed for primary file storage and data protection, replacing it with a Nasuni subscription. The "pay as you grow" subscription reduces up-front capital costs and makes expenses more predictable.

- **Storage:** Cushman & Wakefield is eliminating the need to refresh or add full-sized file servers, while also reducing the costs of networking, floor space, power, and cooling.

- **Data protection:** The company is eliminating on-premises backup servers and software, tape media, and tape vaulting.

"It's straightforward math—we get hardware savings by moving from on-prem storage to cloud storage."

The EMEA offices had been using Windows file servers with local storage, some with SSDs for high performance. Cushman & Wakefield replaced them with Nasuni software and edge appliances, plus Azure. Some large offices needed to add SSDs to support their virtual Nasuni appliances, but most of the small offices transitioned without needing this upgrade.

The EMEA office backup process included nightly incremental backups and weekly full backups to tape using an enterprise-class backup application. Tapes were then sent off-site to a records management provider for disaster recovery. Cushman & Wakefield was able to turn off the entire backup and DR process once each office was fully deployed with Nasuni's continuous versioning file system and Azure redundant storage; this eliminated the costs of backup servers, licenses, and maintenance; backup tapes; and off-site tape storage.

"Our biggest savings are on storage costs, and getting rid of backup storage and software."

Operational Cost Savings

The audit found that shifing to the Nasuni-Azure cloud-based solution allowed Cushman & Wakefield IT staff to spend less time on traditional file management tasks, such as backup, restore, and capacity expansion.

- **Fast, easy backups**: The company is eliminating the need to manage and monitor nightly incremental and weekly full backups, as well as having to restart backups when they fail.

- **Fast, easy restores**: Offices are eliminating restore from tape, which often took several days, and replacing that with fast, granular restore from the cloud.

"Since going live, Nasuni maintains snapshots almost magically – I don't have to jump in."

- **Capacity expansion:** Requests for additional capacity occurred daily with the previous infrastructure. With Nasuni, no time is spent on capacity. "Nasuni looks after itself," according to the IT managers with whom we spoke.

Branch office backups were a constant struggle; sometimes backups were not completed, and other times the backups caused production downtime. Managing backups and tapes took significant IT staff time, particularly on weekends. With Nasuni's continuously versioning file system, file protection is automatic, so Cushman & Wakefield administrators no longer have to manage file backups. The firm's IT managers estimate this saves 15-20 hours per week in every office.

Restore happens in minutes with Nasuni. By simply browsing a web page, any previous version of a file can be easily selected. Nasuni automatically recalls the file from Azure and caches it in the local edge appliance for fast access. Before Nasuni, it could take three to four days just to get a tape back on site. Then it would have to be loaded into the tape library and the restore process started. If the data was not found on that tape, another tape would have to be recalled, restarting the entire process. Cushman & Wakefield IT managers estimate Nasuni is saving hours every week that administrators formerly needed for tape-based restore.

In the past, capacity expansion was a continuing problem, with almost daily alerts that servers were running out of storage. With Nasuni, Cushman & Wakefield no longer needs to add disks, expand shares, or provision new capacity. Volumes can be expanded in Azure with a few clicks, and Nasuni's file system automatically expands to use it, while the edge appliances simply keep caching the active files to prevent downtime. The IT managers say Nasuni saves five to six hours per week in every office in this area. Cushman & Wakefield also reported the newfound ability to audit its storage, something it had been unable to do before Nasuni.

"We never run out of space, which was a big issue before. Nasuni looks after itself."

Increasing User and IT Productivity

This audit validated that Nasuni improved both end-user and IT productivity. Users appreciate that Nasuni is versioning files every 15 minutes, minimizing any data loss or rework in case of a problem. They can select from many granular daily recovery points instead of just a single nightly backup, and IT can spend time on more strategic tasks other than managing backups. Reducing restore time from days to minutes improves productivity for both users and IT.

"Users are impressed by the frequency of snapshots – we can restore to the very point in time when they accidentally deleted a file."

- **Better RTOs and RPOs**: Users benefit from fresher data that is faster to restore; this eliminates the productivity impact of using old data or having to wait days for restore.

- **Faster data access**: Cushman & Wakefield can now eliminate complex driving mappings that were required to accommodate users accessing data from multiple offices. Instead, all data resides on a central volume, globally accessible from any location.

- **Improved IT productivity**: Restore takes just a few clicks instead of hours to days with tape, and Nasuni offers a user self-service option.

The global file system means users can access files from any location; they no longer need complex driving mappings or data migrations to make data accessible and sharable. With Nasuni, data is available from anywhere, with recently used data cached on the local edge appliances for optimal performance. This has helped eliminate data siloes, making end-users more productive. Nasuni also gives Cushman & Wakefield the opportunity to make changes in directory structures that were not possible previously due to capacity constraints.

> *"With Nasuni, we have so many caching appliances, users can just bounce to the next available one. Before, if we lost a file server, it was gone until we could do a full restore. Files are a lot more highly available now."*

The Bigger Truth

ESG's discussions with Nasuni customer Cushman & Wakefield demonstrate the clear advantages of shifting from legacy NAS storage and data protection to a modern subscription solution based on cloud object storage, especially when applied to remote office file server consolidation and multi-site collaboration use cases. In a recent ESG survey, 85% of respondents reported that they are currently using public cloud resources.[3] Nasuni Enterprise File Services is an example of a cloud storage solution that saves money on capital and operational costs, while providing cloud benefits such as productivity increases and greater operational agility.

About halfway through the company's EMEA deployment, Cushman & Wakefield's results are impressive. The company has already reduced the capital costs of primary file storage (along with the networking, power, and cooling required) by replacing traditional file servers with the Nasuni global file system and virtual edge appliances backed by Azure cloud storage. Backup and disaster recovery infrastructure—including servers, storage, software, maintenance, tapes, and off-site vaulting—have been eliminated, replaced with Nasuni's continuous file versioning.

Operationally, the company has dramatically reduced the IT time required to handle backups and DR. Capacity expansion is automatic and non-disruptive, improving user and IT productivity. In addition, the global file system makes it simple and fast to access files from any office, eliminating the need for complex drive mappings to ensure adequate access.

> *"We're considering some changes in EMEA that are only possible with Nasuni – things we just couldn't do with file servers in each office purely because of capacity."*

In addition to cost savings, Nasuni is helping Cushman & Wakefield integrate three merged organizations by streamlining data services, improving file sharing, and eliminating data siloes.

Cushman & Wakefield can already boast about the impact Nasuni is having on the company, even with half of the EMEA and the bulk of its North American deployments still ahead. ESG looks forward to revisiting this economic value validation once the full deployment is complete. But based on the results so far, organizations looking to reduce costs—and who isn't?—would be wise to investigate using Nasuni with their preferred public or private cloud storage.

---

[3] Source: ESG Master Survey Results, *2018 IT Spending Intentions Survey*, December 2017.

Enterprise Strategy Group is an IT analyst, research, validation, and strategy firm that provides market intelligence and actionable insight to the global IT community.

© 2018 by The Enterprise Strategy Group, Inc. All Rights Reserved.