NASUNI

White paper

A no-brainer cost model for moving file storage to the cloud

Your personalized cost savings

Executive summary

Legacy file infrastructure involves a lot of moving pieces that incur (and sometimes hide) a number of capital and operational costs. Enterprises can reduce or eliminate these costs by shifting to cloud-based file storage. When developing a cost analysis for such a migration, it's important to account for all costs — both hard and soft — to be sure you're making an apples-to-apples comparison. Unfortunately, this comparison is not as simple as comparing TB costs for on-premises file storage to TB costs for cloud file storage.

Organizations of all sizes benefit by switching from legacy, on-premises file storage to Nasuni cloud file storage, which uses object storage such as Amazon S3, Azure Blob storage, IBM Cloud Object Storage, or Google Cloud Storage as its back end. Doing so can consolidate NAS and file server silos, enhance cross-office file sharing, improve data protection, reduce operational inefficiencies, and eliminate capacity limitations. But what about cost savings?

> An important benefit of Ithaca Energy in deploying Nasuni is the future-proof approach it provides. We do not have to go through a refresh every three to five years or purchase large volumes of tapes. These benefits offered cost efficiencies that played a critical role in our selection of Nasuni."

Malcolm Brown, IT Operations Manager, Ithaca Energy

If you embrace a cloud-first approach and have to make the case to internal stakeholders that modernizing your file infrastructure is imperative to remain agile and competitive, having cost savings on your side, too, will help seal the deal. Across the board, the cost savings stemming from a switch to cloud file storage are impressive, in large part because expenses that are the norm in a legacy system are either reduced or eliminated.

To get a clearer picture of how much your organization could save with such a switch, this paper provides a breakdown of the typical costs associated with refreshing on-premises file infrastructure as compared to modernizing with Nasuni. While we typically help customers do this comparison by conducting a Business Value Assessment, this paper goes into the details on how to calculate the hard costs and soft costs of each approach yourself. Of course, you can always contact us and we can conduct an assessment for you at no charge.

Hard costs include the capital expenses attributed to refreshing and expanding NAS, file servers, file backup infrastructure (e.g., backup software licensing, media servers, backup storage), disaster recovery infrastructure, and multi-site file sharing infrastructure (e.g., replication, WAN acceleration, duplicate storage, etc.).

Soft costs include those hours dedicated to administering existing file storage, which are substantially reduced by moving to the cloud (and these savings increase significantly if you have several office locations with file storage that you have to manage). Soft costs also include the expense of productivity loss, which occurs as the workforce waits for files to open, files to transfer across sites, and damaged or archived files to be recovered. Productivity losses may also occur when an organization deals with the impact of ransomware or having to quickly transition to a remote, work-from-home business model.

Aside from the bottom-line savings that a switch to Nasuni generally provides, most enterprises appreciate the ability to shift their file storage expenses from a CapEx model to a more predictable and controllable OpEx model.

Each organization has its unique set of circumstances, of course.
This document serves as a way to gain initial insights into the financial benefits such a switch would offer your business.

Understanding the true costs of your existing file storage infrastructure

To consider the financial feasibility of making the switch to modern, efficient file storage built for the cloud, it's important to consider all assets and activities that comprise on-premises file infrastructure. These can be categorized as hard costs – capital expenses for purchasing and maintaining infrastructure hardware and software, as well as facilities costs to house and support these capital expenditures – and soft costs – operational expenses incurred in managing file infrastructure, as well as opportunity costs incurred when systems are not operating or are operating below peak efficiency. Figure 1 below, while not exhaustive, shows many of the components of on-premises file infrastructure that can be replaced by Nasuni's modern, cloud approach to file infrastructure.

It is important to remember that to reap the fullest financial benefit of Nasuni, all office locations and all file storage repositories (NAS, SAN, or Windows File Servers) should be taken into account. It's best to plan to migrate all file data to fully leverage the economies of scale offered by Nasuni and the cloud and achieve the greatest cost savings.

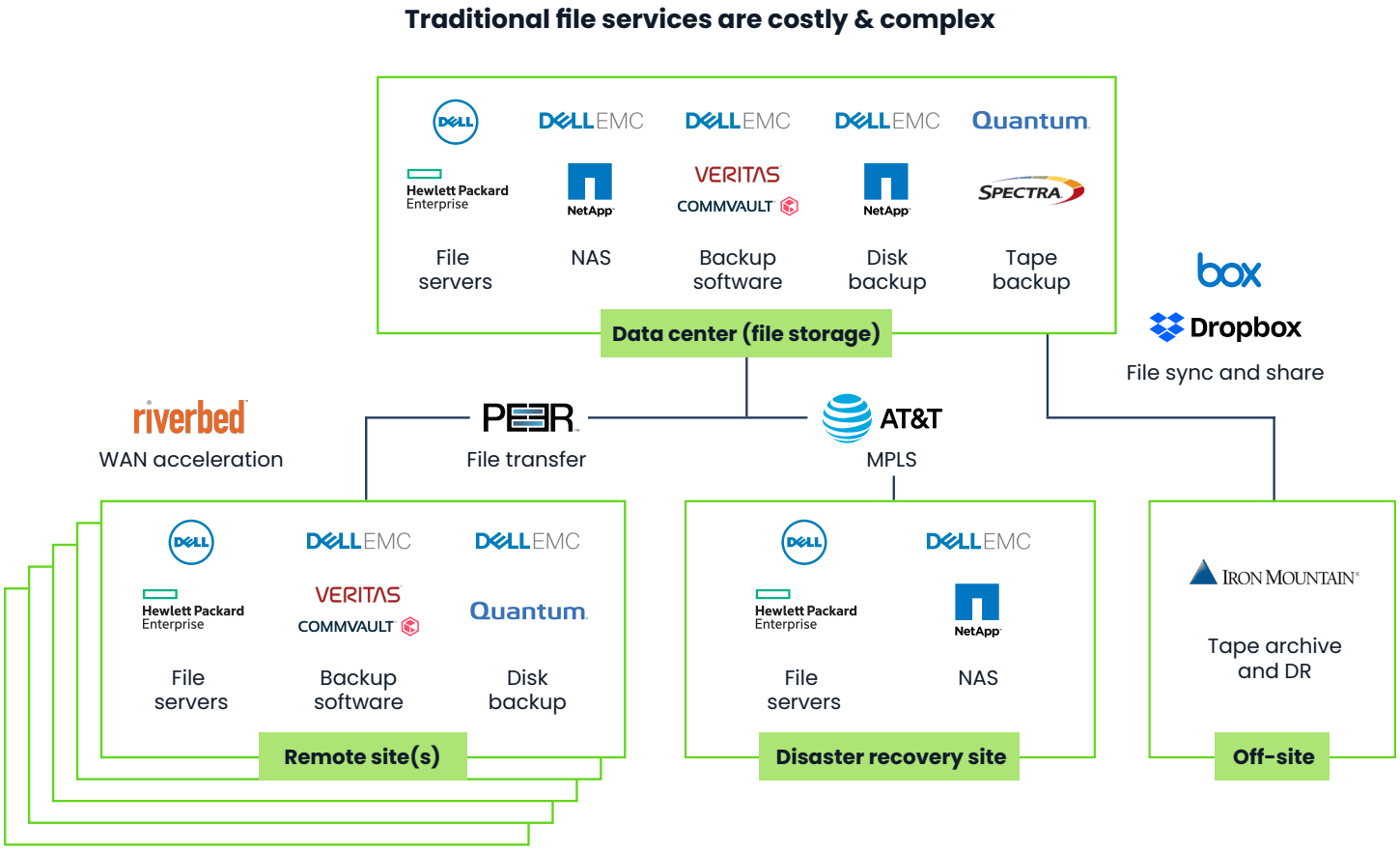


Figure 1. Typical on-premises file infrastructure components rendered obsolete in the transition to cloud file infrastructure.

Hard costs: IT capital and related expenses

Legacy file infrastructure comprises some combination of equipment for primary file storage, backup, and disaster recovery. Organizations make different investments based on differing priorities. Some companies, for example, don't dedicate hardware to disaster recovery in any meaningful way. Or, those that have backup systems may have varying levels of data protection. Some may limit the number of snapshots to 30 while others may require 300. That said, here's a list of likely capital expenses:

Production file storage hardware

This typically includes some combination of file servers and NAS. Multiple company sites usually require multiple capital investments to deploy and maintain infrastructure at each location and are refreshed every 5 years or so.

Backup infrastructure

This typically includes backup software, hardware, media servers, and storage media. Maintaining backup infrastructure at multiple locations may lead to information silos and/or data version control problems.

Disaster recovery file infrastructure

As with other aspects of on-premises file infrastructure, disaster recovery infrastructure may necessitate redundancy at multiple locations. Disaster recovery infrastructure may also involve the additional expense of contracting with an external provider for off-site or cloud-based storage.

Multi-site data transfer

Maintaining the infrastructure to transfer data across multiple company sites can be a significant expense. Infrastructure may include MPLS, WAN acceleration, scripts, and file transfer software.

Data center facilities costs

Line items for electricity, air conditioning, and security among other expenses must be factored into legacy file infrastructure costs.

Soft costs: operational expenses and lost opportunity

Soft costs include time spent in person-hours attributable to conducting or supporting typical file storage activities, time lost waiting for typical file operations to complete in order to conduct company business, and opportunity lost when legacy file storage systems or activities fail, resulting in unplanned downtime or lost revenue.

IT operations: The cost of administering and supporting the various elements of enterprise file infrastructure, including:

- Managing file servers, volumes, and shares
- Managing backup and replication schedules
- Responding to file recovery and out-of-space requests from users
- Dealing with multiple system vendors' contract negotiations and renewals
- Configuring and managing WAN acceleration and remote access tools
- Migrating data to new file servers and NAS hardware
- Applying system and security patches and upgrades
- Managing off-site backup vendors
- Building, configuring, testing, and maintaining DR sites

Business productivity: Often overlooked when calculating the true cost of maintaining legacy file storage are lost business productivity and revenue opportunity due to:

- File server out-of-space issues
- File recovery wait times
- File transfer delays
- File sync wait times
- Long file open times
- File server downtime

Business continuity: Relying on traditional file infrastructure often leaves businesses exposed to:

- Data loss and/or downtime from ransomware and malware attacks
- Inability to quickly change
- Inability to quickly recover data after a regional outage or disaster

Saving on hard and soft costs with Nasuni

By shifting file storage to Nasuni, enterprises of all sizes enjoy the benefits of modernization with limitless primary file storage capacity; built-in, automatic backup and disaster recovery; and instant capacity expansion, across all locations.

An example of cost savings

A global engineering, management, and development consultancy with a workforce of 16,000 employees distributed across 120 offices in more than 40 countries in Asia, Australia, UK, the Middle East, Africa, and the Americas switched from their legacy file storage infrastructure to Nasuni's cloud-based file storage solution. Comparing the anticipated cost of refreshing their existing on-premises file storage infrastructure to the cost of moving to Nasuni cloud file storage demonstrates the clear advantage of modernizing with Nasuni. While every company's situation is unique, Figure 2 below shows savings that are typical for Nasuni customers.

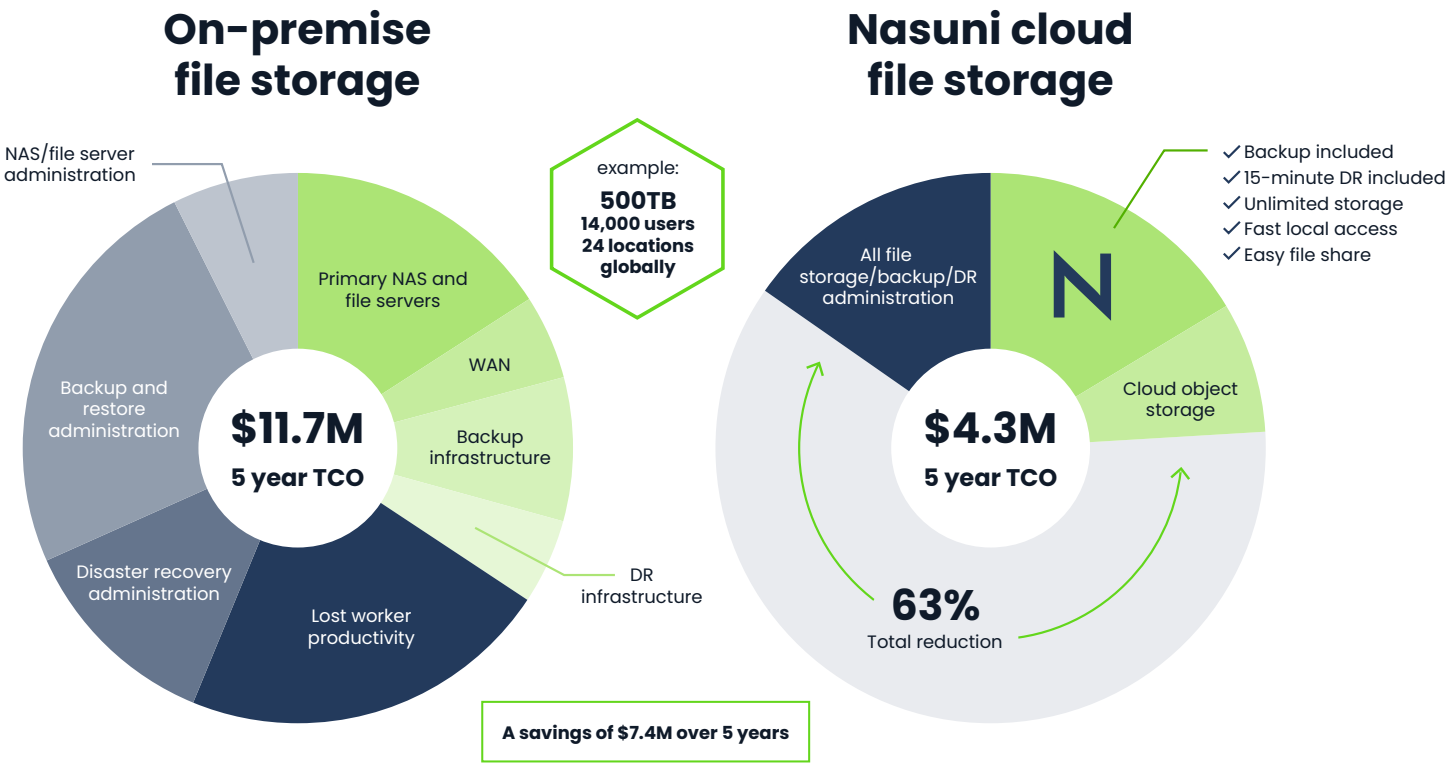
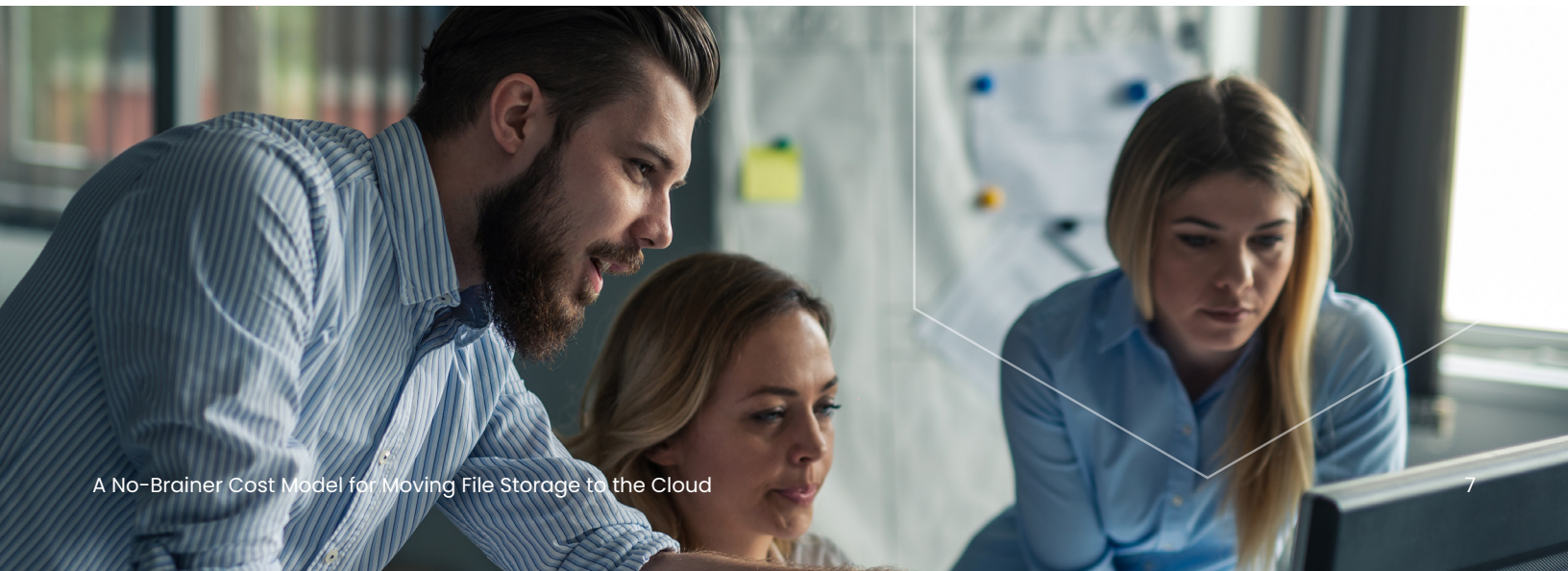


Figure 2: Based on actual customer data, this example shows the savings realized by a large, global organization, which was incurring $11.7 million over five years in hard and soft costs. By switching to Nasuni, costs drop to $4.3 million over the same five-year period.

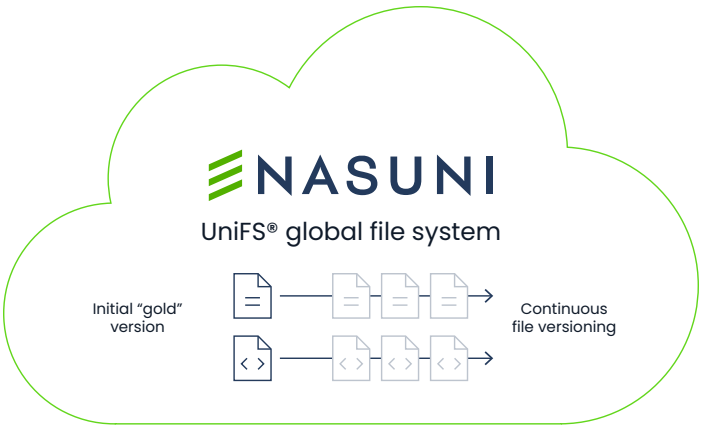


The calculations for the costs of Nasuni cloud file storage are notable for what isn't included. Many of the costs described above are dramatically reduced or are altogether eliminated by switching to Nasuni.

Let's first take note of the hard cost savings. Nasuni replaces legacy file storage hardware (NAS), back up infrastructure, and DR infrastructure through a subscription model. Subscription costs vary based on how much capacity you are licensing, your use case, and your level of support.

Nasuni uses cloud object storage such as Azure Blob, Amazon S3, and Google Cloud Storage to store the "gold" copies of all files, so this cost must also be factored in. Note that Nasuni deduplicates and compresses all data before it is transmitted to cloud storage, reducing the amount of cloud storage needed by an average of 40%. Customers are also able to use a less expensive tier of object storage such as Amazon S3 Infrequent Access or Azure Cool Blob, since more than 98% of I/O requests are serviced by the fast disk or flash storage on each Nasuni Edge Appliance.

Nasuni Edge Appliances cache copies of active files from cloud object storage. These virtual machines can be deployed in any number of on-premises locations or cloud data centers as needed to



provide users with fast file access, and to minimize the latency and egress fees associated with retrieving files from cloud object storage. There is no charge for these VMs, other than the cost of the virtual infrastructure needed to run them.

Note as well that there are no charges for file backup and restore which is automated by Nasuni's infinite snapshot technology (Nasuni Continuous File Versioning).

Similarly, there are no charges for Disaster Recovery. Cloud storage automatically creates multiple copies of all file data, and Nasuni Edge Appliances can be provisioned and hydrated with file system metadata on demand in less than 15 minutes, eliminating the need for dedicated DR sites and standby NAS devices and file servers.

Soft cost savings are often overlooked and underestimated. But intuitively, simplifying the overall file infrastructure with fewer vendors and less technology will yield reductions in several significant areas:

Labor costs to manage a file infrastructure

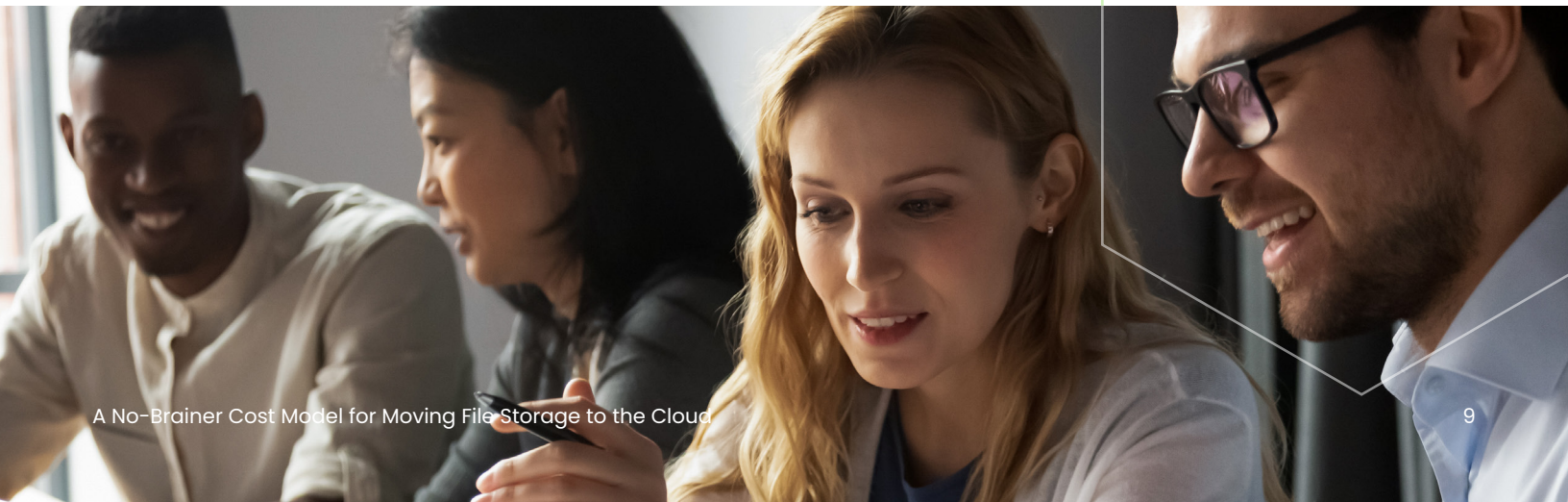
Customers typically find they reclaim 75% of their current file storage administration costs with Nasuni, as multi-site NAS, file servers, backup, and DR are all managed through the Nasuni Management Console (the proverbial "single pane of glass").

Lost hours due to DR interruptions

Disasters are unplanned and unpredictable, but many customers model scenarios of a minor case (1 day) and worst case (3 weeks) to estimate costs due to these interruptions. The calculations compile the cost of lost worker productivity, using an effective hourly rate multiplied by the number of impacted employees. By contrast, with Nasuni, an edge appliance can be brought back online and made accessible in an alternative location or in the cloud within 15-30 minutes, reducing the disaster impact of both scenarios from days or weeks to as little as 15 minutes.

Lost hours due to file recovery wait time

Using the same hourly rate as above, this compares how long employees must wait for files to be restored from backup disks or tapes (usually hours or days) to how long it takes Nasuni to retrieve an earlier file version from cloud object storage (minutes).



The benefits go well beyond one-for-one storage replacement

Nasuni cloud file storage delivers many advantages over traditional on-premises file storage:

- **Centralization of data:** No more data silos
- **No limits on data volumes:** Gain unlimited space on demand
- **Enhanced collaboration:** Access and share files anywhere, anytime
- **Greater storage reliability:** No need to worry about physical deterioration
- **Easier budgeting:** Switching from CapEx to an OpEx model offers more manageable, predictable expenditures
- **Better data protection:** Advanced encryption and unlimited snapshots reduce file recovery points and recovery times to minutes
- **Unrivaled disaster recovery:** Global recovery within minutes for any number of sites
- **More efficient data management:** Data optimization through deduplication and compression
- **More efficient operations:** Overall reduction in personnel needed to administer file infrastructure
- **Smaller storage footprint:** Overall reduction in the amount of file storage capacity needed on-premises by caching only copies of the active data

What can your company expect to save?

To help you get started on your journey to cloud transformation and cost reduction, please contact us so we can perform a no-cost estimate tailored to your company's unique profile of needs.

Let’s talk

Want to find out more about how Nasuni can provide your business with a fluid data infrastructure designed for the hybrid cloud world?

Nasuni’s hybrid cloud platform unifies file and object data storage to deliver effortless scale and control at the network edge.

Learn more

Nasuni is a scalable data platform for enterprises facing an explosion of unstructured data in an AI world, eliminating the choice between expensive tinkering or an overwhelming transformation of your entire data infrastructure.

The Nasuni File Data Platform delivers effortless scale in hybrid cloud environments, enables control at the network edge, and meets the modern enterprise expectation for protected, insight- and AI-ready data. It simplifies file data management while increasing access and performance.

Consolidate data, cut costs, and empower users – all while transforming your data from obstacle into opportunity.

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