

Nasuni File Services



Combining the Best of Cloud
and On-premises Storage

Introduction

Organizations rely on corporate data for everything from product design to order processing. Files are the lifeblood of the modern enterprise and some of its most valuable assets. Today's enterprise data storage solutions are tasked with storing, managing, protecting and providing access to those files in order to support business initiatives. The demands on these storage solutions multiply as organizations become more distributed and the size and volume of files grow exponentially. Simultaneously, IT organizations are under continuous pressure to spend less while taking responsibility for more strategic initiatives. This combination of factors is driving a need for innovative storage solutions that manage and distribute data more effectively in a changing business environment.

Cloud storage has emerged as a tool with the potential to solve the file storage and business challenges of today's enterprise. But this tool must be utilized to its full potential and not simply serve as a repository for old data. Nasuni combines the best features of cloud with edge appliances for local performance and security. Through UniFS®, the first cloud-native file system, Nasuni empowers organizations with a complete set of Enterprise File Services and significant cost savings.

Enterprise Storage Today

Currently, enterprise storage infrastructure is a complex combination of hardware components that must be separately purchased, installed, managed and updated. Organizations struggle with the expense and resource drain required to maintain these systems. Because they are hardware-based, these systems require infrastructure in every location. Additional components such as WAN optimization or replication and additional local storage are required to efficiently distribute files to users in all locations. Together, these systems add up to an enormous capital investment that introduces significant management challenges for IT and, often, a mixed or poor experience for end users.

At the same time, the volume of unstructured data or files is growing at an unprecedented rate within every organization. Enterprises need to support increasing data volumes from this kind of natural growth and effectively handle the addition of new offices and the associated files. Using traditional hardware solutions, this leads to a "ripple effect" expansion of capacity across multiple components, including primary, backup and offsite storage. It can also require the purchase of new hardware and an arduous data migration process. Consequently, scaling through traditional solutions is often costly, slow and painful, negatively impacting business agility.

Organizational growth and collaboration only deepens the complexity. When users in multiple locations require access to the same files, separate components in each location often end up storing duplicate and outdated copies of files. This distribution of data and hardware, along with the associated scattering of IT staff, leads to inefficient file data management. It becomes nearly impossible for IT to have a detailed understanding of where all the files reside, how many copies are stored, which is the latest version and who has access to that information. This taxes IT, reduces end-user productivity and increases the risk of unauthorized access or data loss.

The increasing number and complexity of components in different locations further strains IT. In many cases, they exacerbate the trade-offs between functionality and cost that organizations are forced to make in smaller offices. As a result, remote and branch offices do not have the same data storage features and functionality as the datacenters, and the lack of uniform infrastructure adds a layer of complexity for IT. This leaves end users with an inconsistent experience and IT with the added burden of maintaining disparate solutions.

Due to this combination of inflexible infrastructure, inefficient data management, inconsistent user experience and added strain on IT resources, enterprise data storage has become a business

inhibitor in today's organizations. What enterprises require is a more flexible file storage solution that delivers tighter IT controls and an optimal end user experience.

Nasuni leverages a combination of cloud storage and edge appliances to deliver the complete set of Enterprise File Services, including unlimited scale, continuous versioning and high-performance distributed file access. Powered by UniFS®, the first cloud-native file system, Nasuni is designed to handle every file workload, regardless of performance, location or modality. Overall, Nasuni improves productivity, streamlines costs and delivers the functionality that today's distributed enterprise requires.

Nasuni Enterprise File Services

Nasuni combines on-premises appliances, cloud storage and innovative file system technology to deliver a full enterprise-class file storage solution. By simplifying the way organizations consume, manage and integrate storage, Nasuni allows business to transition from an infrastructure built on complex hardware distributed throughout the organization to a centralized service that enables convenient access from every office and device. Relative to traditional file storage and management solutions, this unique approach provides five major advantages:

1. Unlimited Scale
2. Continuous Versioning
3. High-Performance Distributed File Access
4. Simplified, Centralized Management
5. Reduced Costs

Normally, consolidating a suite of solutions demands some tradeoff in functionality or service. With Nasuni the opposite is true. The next section details how Nasuni simplifies the storage environment while adding functionality, improving service, enhancing the user experience and strengthening protection.

Unlimited Scale

Unlike other storage systems, Nasuni separates file data from hardware. One logical volume is stored centrally in the cloud, and all locations have access to the same single gold copy of data. To ensure fast access for end users, Nasuni caches the most frequently accessed data on local high-performance appliances. This delivers an optimal user experience while keeping local file storage demands to a minimum.

There is no limit on capacity, number of files or directories, because capacity scales in the cloud, not on local disks. This separation of file data and hardware means that capacity can be changed in an instant. Enterprises do not need to buy additional hardware upfront in anticipation of storage growth. Instead, they scale on-demand.

If one location requires additional capacity, that volume is increased centrally and provisioned to the location. No change to the controller at the edge is required and the local hardware footprint remains the same. Furthermore, the minimum capacity of the local cache is maintained in order to ensure a high performance experience for the end user.

Nasuni is the ideal file storage solution to meet the scaling requirements that result from adding and integrating new offices. When a new location is established or acquired, a Nasuni appliance or VM is deployed to that office and connected immediately. Once deployed, that appliance has immediate access to corporate data and storage capacity. If additional capacity is required, it can be added instantaneously. This efficient scaling capability supports growing and changing enterprises with minimal disruption to infrastructure.

Continuous Versioning

Nasuni eliminates the need for separate backup and archive solutions through continuous versioning. The file system constantly pushes changes to the cloud so that the gold copy of each file is continuously updated. What results is a permanent, unlimited, up-to-date history of file data. Continuous versions

are sent to the cloud and IT can roll back to any point in time. End users can also be granted direct access to previous versions, so they can restore any file from any point in time. Finally, since the files are continuously updated, the changes pushed to the cloud are consistently small, which minimizes the impact on bandwidth.

Multiple copies of files are stored in geographically dispersed locations to deliver true geographic redundancy. In the case of hardware failure, business disruption or disaster, IT can recover files by simply deploying a new appliance (hardware or virtual) and establishing a connection to the secure cloud volume, restoring access in under 15 minutes. Continuous versioning mitigates the risk of losing valuable work, and employees can remain productive by restoring recent versions instead of sacrificing hours or even days of valuable time.

The final aspect of file data protection is security. Nasuni was designed with a security-centric approach. In each office, the local appliance encrypts all files and file data before it leaves the security perimeter of the company. Data remains encrypted en route and at rest within the cloud. Furthermore, the keys used to encrypt data are controlled solely by the customer, so that only users within the organization can access encrypted files.

High-Performance Distributed File Access

Typically, each location in an organization has a data set that is unique to that location and a set that is shared between locations. With traditional storage, each location manages different volumes independently. Nasuni allows IT to configure data distribution and sharing in any combination of user and access permissions from a single control point, resulting in true flexibility.

Unstructured data can be distributed from one central location, centrally collected from multiple locations or shared between multiple distinct locations. In all scenarios, every user in every location is consistently accessing the same, most current version of the file stored centrally in the cloud. End users in remote offices do not suffer

from the latency problems common to centralized storage models dependent on WAN optimization and other technologies. Instead, employees at every location enjoy high-performance access to files.

The employees of the modern distributed enterprise are mobile, so file access should be as well. Through a native mobile client, Nasuni provides secure access to all files from any mobile device. This unique distribution and sharing functionality provides a secure alternative to consumer-grade file sharing.

Simplified, Centralized Management

By consolidating multiple storage components into a single uniform solution, Nasuni simplifies management, reduces infrastructure complexity and cuts down on resources required. IT no longer has to spend budget and cycles selecting, buying, installing and maintaining hardware components from multiple vendors. New or acquired offices no longer have to operate as independent storage silos with their own unique suite of solutions. With Nasuni, a local appliance at each location integrates with IT infrastructure through standard protocols such as CIFS and NFS. Remote offices enjoy the same access to data, automatic protection and high-performance file access as headquarters.

IT centrally manages the entire file storage ecosystem through a single pane of glass with the Nasuni Management Console, controlling provisioning, access and more. Nasuni proactively monitors and supports the complete end-to-end solution across the enterprise, further reducing cost and confusion. This centralized approach enables full visibility and control of all file storage across the organization.

Reduced Costs

Nasuni streamlines and reduces file storage costs by eliminating the need for multiple hardware components and separate solutions for backup, archive and more. On average, Nasuni clients save 40-60% relative to traditional storage and protection solutions.

The combination of efficient local caching and the unlimited capacity of the cloud ensures that enterprises do not need to expand their storage footprint to keep pace with file growth. Additionally, organizations no longer have to pre-pay for capacity based on projected usage. Nasuni clients pay for the storage they use when they use it.

The actual cost of storing, protecting, securing and managing data by volume becomes easier to project because IT only has to deal with a single product from a single vendor instead of a suite of solutions. The ability to correlate costs to actual volume stored makes it possible to charge back to business line functions rather than viewing data storage as a required capital investment.

Business Impact

Nasuni not only replaces an organization's file storage ecosystem with a streamlined, uniform and feature-rich solution offering the full suite of Enterprise File Services. The transformation of infrastructure delivers additional value as file storage becomes a true enterprise asset aligned with the company's core goals. In addition to the five key benefits above, Nasuni also delivers:

Enhanced Agility

Today's organizations are dynamic. Teams and responsibilities move between offices. Companies expand and consolidate. Priorities change. As a result, IT needs to provide agile solutions that are not anchored to inflexible storage hardware. By delivering unlimited capacity, Nasuni allows companies to scale on demand, without having to purchase new hardware and migrate data onto those platforms.

Nasuni's unique design and high-performance distributed file access allow employees to remain productive regardless of location. Enterprises can integrate new or acquired offices quickly and painlessly. These offices enjoy the same file access, performance and protection as any other location within the organization, thus easing the transition for end users and IT. Nasuni is built for business agility,

whether that means integrating new locations, accommodating traveling employees or supporting a sudden influx of files needed for a new initiative.

Increased Productivity

In the modern enterprise, IT is often asked to do more with less. Nasuni makes this possible by extending IT's reach across the enterprise through centralized management. The consolidation of all the systems that make up traditional hardware storage infrastructure into a single streamlined solution relieves IT of the burden of managing hardware, saving companies real employee-hours per week. Freed of these responsibilities, IT can spend more time on strategic projects with more business value.

Finally, as mentioned above, Nasuni also saves enterprises in reducing file storage infrastructure costs by 40-60% relative to traditional storage solutions.

Conclusion

Nasuni replaces traditional storage and protection infrastructure with an integrated solution that delivers the complete set of Enterprise File Services. Our clients benefit from a consolidated, uniform solution that stores, protects, manages and accesses files more effectively and efficiently than any system available today. The technology empowers IT by expanding control, supporting accelerated file growth and providing high-performance distributed file access to remote locations and users. Organizations that switch to Nasuni benefit from improved data protection, user experience and availability across their entire business.

With Nasuni, IT can finally shift its focus from managing hardware to managing files, and making them available whenever and wherever they are needed to drive productivity, efficiency and growth within the enterprise.

About Nasuni

Nasuni provides an integrated solution to store, protect, share and access all enterprise files. Powered by UniFS®, the first cloud-native file system, Nasuni transforms enterprise file infrastructure. With unlimited scale, continuous versioning and high-performance distributed file access, Nasuni delivers the complete suite of Enterprise File Services — all at a significantly reduced cost.