Case Study: JSJ Corporation

JSJ Enables Cross-Office File Sharing and Streamlines Manufacturing with Nasuni

Business and IT Challenges

JSJ Corporation designs, develops, markets, and brands durable goods worldwide. A global holding company with a diverse portfolio of businesses, JSJ manufactures products for automotive, industrial, and commercial machinery and equipment, as well as furniture, signs, paper products like cards and invitations, and even pulleys and conveyor belts.

JSJ is headquartered in Grand Haven, Michigan with major locations in the US, China, Japan, and Mexico. The increasingly global nature of its business led the company to look for a more scalable file storage solution to reduce costs and improve cross-office manufacturing productivity.

Ineffective Multi-Site File Sharing

JSJ's automotive division unearthed one of the firm's biggest file storage challenges – the inability for engineers in China and Mexico to effectively access the same files as their counterparts in the US. Because this is a key requirement for the division's multi-site product lifecycle workflow, JSJ's central IT team initially implemented centralized file storage at headquarters along with WAN optimization to deliver files to the remote locations. However, issues with this approach led to an increasing number of engineering complaints about long file transfer and open times.

Summary

Global File System: Nasuni

Object Storage: Amazon

Total Capacity: 100 TB

Locations: 20

Key Applications: Dassault CATIA™ CAD, Microsoft Office, .txt results files

Use Cases: Remote NAS and file server consolidation; global file collaboration

Benefits: Improved manufacturing team productivity; lower IT costs; faster file recovery; more recovery points; simpified file infrastructure

Explains Jason Benway, IT Infrastructure Manager at JSJ, "Internal dissatisfaction from our distributed engineering teams drove IT to start looking for a better solution to cross-site file sharing. Some of our engineers were seeing up to a 20-minute wait to load a single set of CAD drawings."

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Rising File Storage Costs

Increasing demand for centralized file storage in the data center, combined with a growing number of Windows file servers in remote offices, was driving up capital costs. When JSJ's IT team factored in the capital costs of backup software and WAN acceleration software licenses, annual maintenance on these licenses, and tape and disk media, plus the IT staff resources and time needed to administer the various solutions, they were shocked at the number.

Comments Benway, "We were spending a lot on our file infrastructure, and it still wasn't meeting business or IT requirements. We realized the time had come to find a better solution."

Unreliable File Backup

On top of the challenge of administering data center backups, several remote locations, including JSJ's large offices in China and Mexico, had their own Windows file servers that required local backups.

Says Benway, "We were doing file backup one way in the data center and another way in the branch offices where we didn't have as many IT resources. This lack of standardization opened the door for the usual range of issues, from incomplete backups to insufficient recovery points and recovery times."

Solution

Benway and JSJ's Vice President and Chief Information Officer Dave De Young led the manufacturer's transformation from traditional file storage to a cloud-based file storage solution using Nasuni enterprise file services and Amazon S3 object storage.

File data on the company's existing NAS devices and Windows file servers was migrated through Nasuni edge appliances to Amazon object storage. Nasuni deduplicates and compresses the file data before storing it in Amazon so less cloud storage capacity is needed. Nasuni also encrypts the data before sending it to Amazon using AES encryption keys held by JSJ, ensuring all files are secure both in transit and at rest.

The Nasuni UniFS® global file system stores the gold copies of all files in cloud object storage, but caches the active files on Nasuni edge appliances at each JSJ office to provide high performance access through CIFS or NFS/SMB file sharing protocols. The edge appliances look and act like the former NAS devices and file servers, except they require, on average, 80% less hardware resources, since they only store the active files.

Nasuni uses affordable, high-speed internet bandwdith to synchronize changes made to any file in any location across all edge appliances.

Comments Benway, "We started out looking for a way to accelerate cross-site file sharing. But we soon realized that cloud storage and Nasuni's global file system could also address backup, versioning, and disaster recovery. Those were huge selling points."

Results

JSJ's IT team implemented Nasuni's global file system with Amazon S3 object storage, along with Nasuni virtual edge appliances in each location.

High Performance Global File Access

Nasuni's intelligent caching minimizes cloud egress charges, while ensuring files are available on each local edge appliance at LAN speed. Every office can now access files without delay, eliminating the wasted time and lost productivity that came from waiting for files to transfer.

Comments De Young, "We no longer hear complaints about slowness of file access. The hybrid cloud model we chose of using Nasuni's global file system in Amazon cloud storage with Nasuni appliances in each office is delivering the file storage capacity and performance we always hoped we could have."

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> Dave De Young, CIO and VP IT, JSJ Corporation

Adds Benway, "If end users, especially engineers, are able to accomplish their jobs without contacting us, that's success. That's been more of our experience with our Dassault CATIA CAD files and other unstructured data since we switched to Nasuni and cloud storage."

40% Reduction in File Infrastructure Costs

JSJ has found that switching to Nasuni and cloud storage is saving the company about $300,000 in capital costs each year. The savings come from a reduction in:

NAS and Windows file servers. Nasuni edge appliances that only need enough capacity to cache the active files have replaced the traditional full-sized NAS arrays and Windows file servers that need to be refreshed every 3-5 years.

Backup infrastructure. Nasuni continuous file versioning – a built-in feature of the Nasuni UniFS global file system – captures the small fragments of file changes as they occur, storing them as their own versions in object storage. This has eliminated the cost and complexity of separate file backup software, hardware, and media.

MPLS bandwidth and WAN acceleration. With Nasuni, file traffic now travels in de-duplicated, compressed, and encrypted chunks over the public internet instead of private network bandwidth, minimizing the cost of MPLS and WAN acceleration hardware, software, and maintenance.

In addition, by consolidating file storage in a single volume, JSJ now has a more accurate view of storage costs and can charge each business based on usage.

Says Benway, "IT always likes solutions that enable us to save time and money and deliver better service to the business. Nasuni is one of those solutions for us."

Better Backup and DR

Beyond reducing costs, Nasuni's continuously versioning file system is providing superior data protection delivered uniformly across all locations. The previous 24-hour file recovery window has been reduced to minutes, and IT centrally manages file protection for both JSJ's data center and remote offices.

Explains Benway, "Standardization is important to us. We no longer have to put a totally different backup solution in place just to protect remote sites. Now, we put a Nasuni appliance anywhere and it's exactly the same as every other site. If we ever have a disaster, the recoverability time of Nasuni is much faster with a lot less risk than needing to restore a full NAS device or Windows file server from backup. We can spin up a Nasuni appliance on our virtual infrastructure or even in the cloud and have file access back in about 15 minutes."

Next Steps

With Nasuni and cloud storage, JSJ is improving service delivery and achieving greater management and control, all while realizing significant cost savings. The increased agility of its hybrid cloud solution also gives JSJ more choice and flexibility with regard to business operations and potential expansions. New offices can be up and running in no time with full access to all corporate file data, simply by deploying a virtual edge appliance.

Concludes Benway, "Nasuni is the default location for all our files. It's like having one big file server for Office docs, CATIA CAD files, test data from the factory floors, validation data, and more. And it's globally accesible from all our locations. We look forward to having more analytics on our file data so we can make better decisions about what tiers of storage we want it to reside on and where cache sizes need to be increased. More analytics would also help us communicate more with our business units about why their storage utilizaiton is increasing."

About Nasuni

Nasuni enables enterprises to store and synchronize files across all locations at any scale. Powered by the Nasuni UniFS® global file system, Nasuni file services stores unstructured data in object storage from providers such as Amazon, Dell EMC, IBM, and Microsoft, while caching actively used data wherever it is needed – on-premises or in the cloud – for high performance access. By using Nasuni to collaborate on files across multiple sites and consolidate Network Attached Storage (NAS) and remote office file servers, customers maximize workforce productivity while reducing IT cost and complexity.

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