



Case Study: Faith Regional Health Services

Limitless Capacity, Cost Savings & Rapid DR for a Growing Hospital

Cloud storage and Nasuni help care provider save 260% over 3 years

Business and IT Challenges

Faith Regional Health Services treats more than 150,000 patients across 13 counties in the midwestern U.S. The fast-growing care provider received the 2018 Distinguished Hospital Award for Clinical Excellence™ from Healthgrades, the leading online resource for comprehensive information about physicians and hospitals, placing Faith Regional in the top 5% for clinical performance among nearly 4,500 hospitals nationwide.

Like many hospitals, Faith Regional's rapid growth is putting pressure on its file infrastructure, creating challenges for both its IT organization and its clinicians.

Insufficient and Costly File Storage

The hospital's file data consists of:

- User and department file shares
- Marketing media and video files
- Cardiology Picture, Archiving and Communication System (PACS) images
- Sleep studies
- Parts of patient health records
- Radiology images
- Pill cam video (shows pills being swallowed and processed through the body)



Summary

Global File System: Nasuni

Object Storage: Microsoft Azure

Total Capacity: 300 TB

Locations: 13

Users: 1,400

Key Files: Medical images; video; health records

Use Cases: NAS Consolidation

Benefits: Scalable storage that reduces costs by 260% over 3 years; rapid DR; 80% reduction in infrastructure; annual backup costs eliminated; strong security protects sensitive data

As Faith Regional's cardiology practice expanded, its SAN could no longer provide sufficient capacity to store the increasing number of PACS images, as well as the other file data. Forseeing continued growth, the IT organization did not want to undertake an expensive SAN or NAS refresh, only to have to do it again in 3 years.

Inadequate Backup and DR

The organization's backup and disaster recovery processes needed to be made faster, more reliable, and more efficient. With Ransomware attacks on the rise, the IT team wanted to be able to restore unstructured data to the point immediately before any attack to minimize data loss – something its traditional backup solution could not provide.

Explains Paul Feilmeier, IT Director at Faith Regional, "Malware was in our environment and that was a huge source of concern. We needed a way to prevent our files from being taken hostage."

With its two main data centers situated only a few miles apart in a region of the U.S. known as "Tornado Alley," Faith Regional also needed a disaster recovery solution that would ensure business continuity in the event of a regional disaster.

Security and Compliance Constraints

Any technology deployed at Faith Regional has to be compliant with the Health Insurance Portability and Accountability Act (HIPAA). HIPAA compliance is critical since PACS system files include patient information (PHI).

Comments Feilmeier, "Maintaining HIPAA and PCI DSS compliance is an ongoing challenge. This, combined with the need for better backup and DR, made us look for a more transformational approach than simply buying more of the same old storage, backup, and replication solutions."

A Need for Business Agility

Strategically, the IT organization wanted to move more of its infrastructure into the cloud and away from solutions that might slow or even prevent continued expansion. Storage was a prime target, as traditional storage with expensive, hardware-based capacity upgrades requires lengthy implementation times, complex third party backup infrastructure, and space in the data center. Faith Regional wanted a more agile solution that would minimize the amount of floor space, power, and cooling needed in its growing campus and enable IT to respond faster to the needs of clinicians.



Solution

The IT team at Faith Regional began researching how it could leverage cloud object storage as a more cost-effective option for capacity. Azure soon emerged as the cloud storage front-runner, but what was missing was a way to store files in Azure using Faith Regional's existing file sharing protocols, and provide clinicians with high performance image access on-premises without incurring cloud latency or egress charges. Faith Regional also needed to address its backup and DR needs.

An Azure-certified solution from Microsoft Azure Global ISV Partner of the Year Nasuni Corporation was the answer. Nasuni® file services is now fully implemented in a hybrid cloud configuration, with all files and file versions stored by Nasuni's global file system in Azure, and the actively used files cached by Nasuni edge appliances in each Faith Regional location.

Results

Powered by Nasuni UniFS®, the first global file system designed to reside fully in cloud object storage but extend anywhere high performance file access is needed, the Nasuni file services platform is now providing Faith Regional with scalable file storage capacity, advanced data protection, and nearly instantaneous DR in a single, unified solution, all at much lower cost than traditional file infrastructure.

Unlimited, On-Demand File Storage Capacity

Nasuni stores the gold copies of all images and files in Faith Regional's Azure storage account, along with all file system metadata. Nasuni edge appliances are deployed in each Faith Regional location to cache just the frequently accessed files. Clinicians, other hospital users, and the cardiology PACS system connect to the edge appliances for local storage, and the edge appliances, in turn, connect to Azure storage volumes. Since Nasuni uses CIFS and NFS file sharing protocols as well as the hospital's existing Active Directory infrastructure, IT did not have to change its existing drive mappings or authentication and access policies.

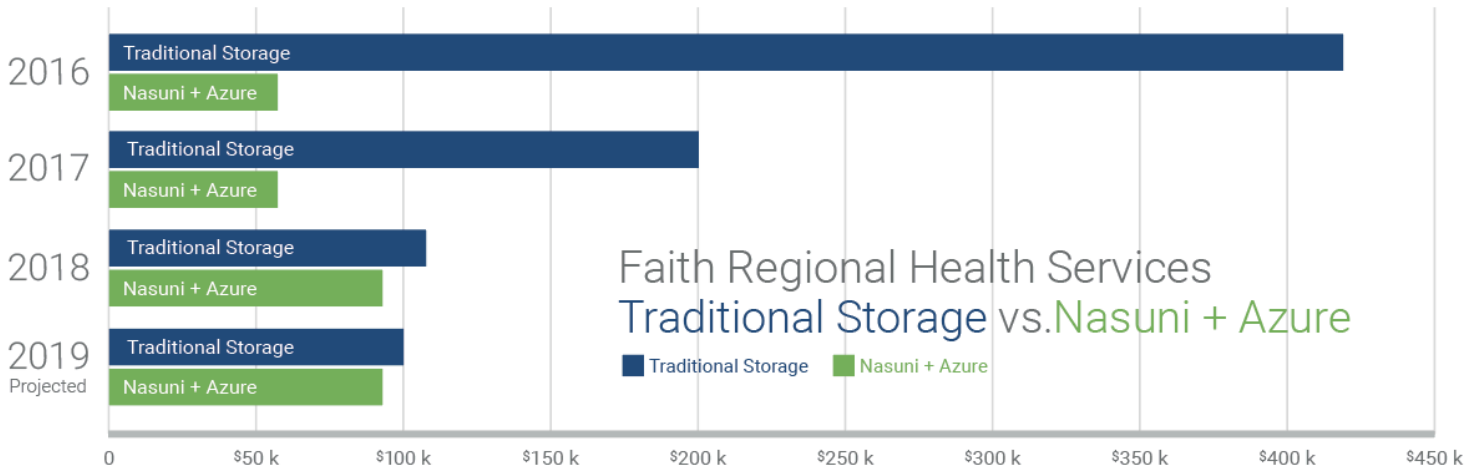
"In terms of protecting patient data and leveraging a more scalable cloud technology, we feel like we are ahead of the curve by partnering with Nasuni."

Paul Feilmeier
IT Director
Faith Regional Health
Services



80% Reduction in Storage Hardware Costs

Faith Regional had been spending about \$400,000 annually on its traditional file storage. Because Nasuni caches only the actively used files, which are approximately 20% of total file capacity, Faith Regional has been able to reduce its on-premises storage hardware capacity needs – and costs – by about 80%, as well as the associated costs of floor space, power, and cooling.



No More Backup Pain & Expense

Nasuni Continuous File Versioning™ is Nasuni’s disruptive approach to data protection in which snapshots of the file system are constantly taken. New or changed data is chunked, de-duplicated, compressed, encrypted and stored in Azure, providing an infinite version history of every file, eliminating the need for costly, difficult-to-maintain third party backup tools.

Comments Feilmeier, “Nasuni’s versioning ability is incredible. It’s light years ahead of anything else we looked at. My team doesn’t have to worry about backup schedules, windows, RPOs, and RTOs anymore. It’s all automated. Plus, we’ve been able to eliminate about \$20,000 in annual backup maintenance, and avoid new file backup licensing costs as we grow.”

Ransomware Protection

Nasuni Continuous File Versioning also mitigates the threat of Ransomware at Faith Regional. If a cyberattack slips through the first line of defense, IT can roll back to a previous version of the entire file system, a directory, or an individual file to a date and time stamp right before the Ransomware attack. The amount of data loss is minimized, downtime is avoided, and business continuity is assured.

Ultra-Fast Disaster Recovery

By storing the gold copies of all file data and metadata in cloud object storage, Nasuni leverages Azure Storage replication, which automatically copies Faith Regional’s file data across Azure zonal data centers within the same region or across regions. This built-in geo-redundancy ensures the hospital’s data is protected against disaster.

“If we lost our data center, all we would have to do is find a PC and point to the Nasuni share in the Azure cloud. It would literally take minutes to recover data.”

Paul Feilmeier
IT Director
Faith Regional Health Services

From a recovery standpoint, Nasuni edge appliances can be instantiated anywhere to restore fast file access. If Faith Regional's offices are unavailable, Nasuni edge appliances can be deployed as VMs directly in Azure.

Explains Feilmeier, "If we lost our data center, all we would have to do is find a PC and point to a Nasuni share in the Azure cloud. It would literally take minutes to recover our data."

HIPAA Compliance

Nasuni's approach to security extends beyond what traditional data center file storage offers. All file data is encrypted on each Nasuni edge appliance using the AES industry standard before being sent to Azure cloud storage. Encryption keys are held by Faith Regional, so neither Nasuni nor Azure nor anyone else can see the file data at rest or in transit. Nasuni leverages the hospital's Active Directory infrastructure for authentication and access. And Microsoft Azure Storage is one of its cloud services certified to hold PHI. Says Feilmeier, "We won't even look at a technology before we can be sure it will comply with our HIPAA requirements. Nasuni and Azure passed all our tests."

Next Steps

Nasuni has enabled Faith Regional Health Services to achieve two of its primary objectives – scalable, cost-effective file storage and more reliable, faster data protection and DR. However, the firm is also unexpectedly benefiting from greater IT efficiency – the elimination of backup has freed up resources for other projects – and lower, more predictable storage costs. The organization has moved away from unpredictable storage array CAPEX to pay-as-needed OPEX, and will save 260% over 3 years as a result.

Together, Nasuni and Azure are helping Faith Regional Health Services transform how it stores and protects unstructured data – including patient images, sleep studies, videos and more – enabling the hospital to efficiently and cost-effectively scale operations, and treat patient data with the same care that its providers treat their patients.

Concludes Feilmeier, "We foresee migrating more of our data to the Nasuni-Azure solution, such as department shares and additional PACS systems, because of how easy it is to deploy and manage, not to mention the cost savings."

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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