

E-BOOK

Nasuni for Windows Server 2012 File Server Migration





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Extended **support** for Windows Server 2012 and 2012 R2 **will be discontinued** on October 13, 2023.

The Challenge: Replacing Windows Server 2012 File Servers Before They Reach End of Support

Mainstream support for Windows Server 2012 and 2012 R2 ended several years ago, in 2018. Although Microsoft continues to provide extended support for these Windows Server versions, that too is coming to an end. Extended support for Windows Server 2012 and 2012 R2 will be discontinued on October 13, 2023. With Windows Server 2012 often used as a file server, customers will need to find a new place to store and share enterprise files.

Upgrading to the Next Windows Server Version

Upgrading your file server or migrating file data to a new server that's running a current Windows Server operating system are viable options, but keep in mind that even the latest Windows Server release will have a limited lifespan. In three to five years the upgrade or migration process will have to be repeated all over again.

The process of moving to a new Windows Server version also places a strain on IT resources. Not only do the costs involved stretch already meager IT budgets even thinner, but members of the IT staff must dedicate time to pre and post migration testing. This is in addition to the time required to complete the actual upgrade or migration process. These staff hours could be better spent on initiatives that will help to grow the business.

Historically, IT pros have often sought to reduce cost and complexity by opting for an in-place Windows Server upgrade rather than performing a migration. However, upgrading Windows Server 2012 systems may prove to be far more cumbersome than past upgrades.

Windows Server 2012 was launched at a time when the public cloud was just beginning to gain mainstream acceptance. Microsoft Azure and Amazon AWS were both launched in 2010, but it took some time for the platforms to see widespread use. This means that Windows Server 2012 was the first Windows Server version to be widely deployed in the public cloud. While there are cloud-based Windows Server 2008 instances, Windows Server 2012 was far more prevalent.

Upgrading a cloud-based Windows Server instance is significantly more complex than upgrading a physical or virtual machine that is running in an organization's own datacenter. Before an organization can begin an upgrade of a cloud-based Windows Server 2012 or 2012 R2 virtual machine instance, they must make sure that the virtual machine instance type is adequate for the new version. They may also need to allocate additional space to the boot volume to accommodate the upgrade process.



It is equally important to remember that **enterprises continue to see unprecedented growth of their unstructured data**. The ever-increasing number of files increasingly strains file server backups and disaster recovery mechanisms. Continuing the status quo will only add more cost and complexity.

While such capacity adjustments are somewhat analogous to the preparations that must be made prior to upgrading a Windows Server that is running on premises, there are additional steps that are unique to operating in the cloud. In the case of a Windows Server 2012 instance that is running in the Amazon cloud for example, admins will need to check and see if the virtual machine instance is using the older style PV drivers and then upgrade to the newer driver type. Admins will also need to use PowerShell to manually remove the EC2Config service from the instance and replace it with Amazon's EC2Launch service. Once this is done, it is also necessary to install the SSM agent. Finally, an admin will need to create an EBS volume containing the Windows Server installation media, attach the volume to the virtual machine instance, and then initiate the upgrade process.

Upgrading a cloud-based Windows Server 2012 or 2012 R2 instance can be a complex undertaking, and the process is likely to be unfamiliar due to the fact that this will be the first time that many admins will have to deal with a cloud-deployed Windows Server operating system reaching its end of life.

Although cloud-based virtual machine instance upgrades may become easier at some point in the future, organizations must consider the strain that performing such upgrades every three to five years places on their IT resources. It is equally important to remember that enterprises continue to see unprecedented growth of their unstructured data. The ever-increasing number of files increasingly strains file server backups and disaster recovery mechanisms. Continuing the status quo will only add more cost and complexity.

Windows Server 2008: What's Holding People Back?

When a Windows Server version reaches its end of life, it will not stop working. End of life simply means that Microsoft no longer provides updates and technical support for that version. As such, there will inevitably be some organizations that continue using a Windows Server version after its end of life date.

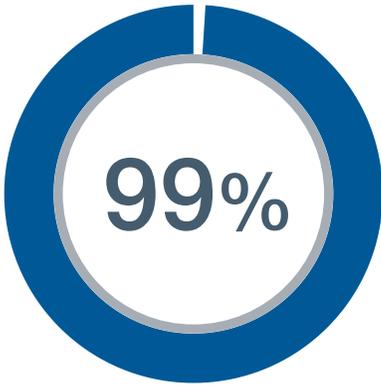
The vast majority of or enterprises have long since migrated off Windows Server 2008, but there are some Windows Server 2008 deployments remaining. Some of the more commonly cited reasons for continuing to use an outdated operating system include the cost and complexity associated with an upgrade, as well as version compatibility concerns. Even so, organizations must prioritize retiring their Windows Server 2008 systems, because the lack of updates presents makes these systems increasingly vulnerable to attack.

The Modern Solution: Using Nasuni to Rehost Files to Azure and Maintain Fast, Local Access

Windows Server 2012 End of Support (EOS) is the perfect opportunity to rehost file server workloads to Microsoft Azure Cloud Storage with Nasuni Cloud File Services™, so files never have to be migrated again. Nasuni, a top Azure ISV, offers the first file system designed for cloud object storage instead of traditional file servers or NAS systems. Nasuni's patented UniFS® file system enables all file data and metadata currently stored on Windows Server 2012 to be easily migrated to Azure Cloud Storage.

UniFS also extends on-premises to preserve local, high-performance file access. Nasuni Edge Appliances are stateless virtual or hardware appliances that cache actively used files anywhere fast file access is needed. Since active files typically comprise only 15-20% of an average file workload, fast file access can be provided using 80-85% less hardware resource. Nasuni's Intelligent caching yields a 99% cache-hit rate to minimize Azure data egress charges.

Nasuni's unique "cloud-first" architecture offers the best of both worlds: the scalability, durability, and low cost of Azure Cloud Storage, and the CIFS/SMB and NFS-based application compatibility, local LAN file access performance, and Active Directory-based security of traditional Windows file servers.



Nasuni's Intelligent caching yields a **99% cache-hit rate** to minimize Azure data egress charges.

How Nasuni Works

Nasuni Cloud File Services is a software-defined platform that consolidates Network Attached Storage (NAS), distributed file servers, data protection, instant recovery, file archiving, multi-site file synchronization, and global file locking in one simple, scalable solution that spans the data center and the cloud.

Features include:

- UniFS object storage-based file system ingests files through CIFS/SMB and writes files and metadata as objects in Azure Cloud Storage, preserving all NTFS permissions and attributes.
- Lightweight edge appliances cache active files on-premises to provide high performance file access, replacing full-sized file servers.
- Nasuni Continuous File Versioning™ writes all file changes as they occur as WORM objects in Azure Cloud Storage, creating an infinite version history that eliminates the need for traditional file backup.
- Edge appliances can be provisioned in any location or in Azure and rehydrated with metadata from georedundant Azure Cloud Storage in less than 15 minutes, providing rapid DR in the event of local outages or regional disasters. The need for dedicated DR sites and infrastructure is eliminated.
- Data is encrypted with customer-controlled keys to ensure data is secure in transit and at rest in Azure.
- Optional multi-site file synchronization and global file locking ensure users in different offices are always working on the latest versions of all files and can collaborate on the same files without version conflict.

| WINDOWS SERVER 2012 MIGRATION PATHS | | |
|-------------------------------------|---|--|
| INFRASTRUCTURE | ON-PREMISES OPTIONS | CLOUD OPTIONS |
| Server operating system | Upgrade to Windows Server 2016 or later | Move to Azure |
| Server hardware | <ul style="list-style-type: none">• Upgrade server hardware• Hyperconverged system• Azure Stack | Azure Virtual Machines |
| File storage | Nasuni Cloud File Services and Azure Cloud Storage | Nasuni Cloud File Services and Azure Cloud Storage |
| File backup and DR | Nasuni Cloud File Services and Azure Cloud Storage | Nasuni Cloud File Services and Azure Cloud Storage |

Nasuni, together with Microsoft and our joint channel partners, have been **helping organizations migrate file data to Azure Cloud Storage since 2013.**



How Nasuni Compares

Nasuni offers unequalled capabilities compared to other cloud-based file storage solutions.

- No limits on number of files, users, or capacity
- Unlimited file versions
- Uses low cost Azure Cool blob storage; compression and deduplication reduce cloud capacity needed
- Azure used as the authoritative source (gold copy) of all files and metadata, not as a secondary storage tier
- Inactive data automatically reclassified to lower cost Nasuni Archive subscription; data remains in Azure Cool storage, eliminating need to migrate data to lower cost storage tiers to save money
- High speed file synchronization and version alignment across all edge appliances for multi-site file sharing
- Global file locking enables multi-site file collaboration without version conflict
- Supports multiple private (on-premises) and public cloud object storage platforms to maximize flexibility
- Multi-site management of edge appliances, shares, protocols, and recoveries to simplify operations

Proven Technology

Nasuni, together with Microsoft and our joint channel partners, have been helping organizations migrate file data to Azure Cloud Storage since 2013. Full implementations can be completed in a few weeks. Coca-Cola, Condé Nast Publications, Cushman & Wakefield, Jabil, Kiewit, Lloyd's Register, Pernod-Ricard, Ralph Lauren, and Sports Direct are just a few of the customers who have moved their Windows file server infrastructures to Nasuni Cloud File Services and Azure Cloud Storage.



ABOUT NASUNI, CORPORATION

Nasuni provides modern cloud file storage, powered by the world's only cloud-native global file system. Nasuni is a cloud replacement for traditional network attached storage (NAS) and file server silos, consolidating file data in instantly expandable cloud object storage at a fraction of the cost. Nasuni also eliminates the need for complex legacy backup and disaster recovery infrastructure, dramatically simplifying IT administration. Nasuni is headquartered in Boston, Massachusetts, USA. For more information, visit www.nasuni.com.

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