

E-BOOK

Reduce risk during your SAP to Azure migration

Build reliable, high performance
landscapes as you upgrade and
migrate SAP systems to Azure



Move your SAP file data to the cloud efficiently

Whether you move your SAP landscape into the cloud with a “lift-and-shift” or “lift-and-update” approach or you go all the way to SAP S/4HANA, file storage is essential. But many organizations have custom infrastructures that increase the complexity and management overhead of cloud deployment, canceling out many of the benefits of moving to the cloud. Reliance on Linux compute nodes with attached block storage limits the scale and performance of any file environment, whereas ready-to-use file storage offers immediate benefits.

Azure NetApp Files simplifies the administration of your SAP landscape in the cloud. Because Azure NetApp Files is a fully managed service, you no longer have to build your own file infrastructure and hire a team of experts to maintain it. You get all the capabilities of an enterprise file storage array with Linux file storage (NFSv3 and NFSv4.1) right out of the box. And because Azure NetApp Files is certified for use with SAP HANA, you can safely migrate your SAP HANA landscapes and avoid many of the risks that are associated with other cloud storage solutions.



You have four main paths to get your SAP landscape to the cloud:

1. **Lift and shift.** Replicate your current environment (including the old architecture) and start running it in Azure. Then start the process of building and migrating to an SAP S/4HANA landscape in the cloud.
2. **Lift and migrate.** Clean up your current environment, update patches, delete garbage, and move the cleaned-up architecture to the cloud. Then start the process of building and migrating to an SAP S/4HANA landscape in the cloud.
3. **Shift and migrate.** Transition to SAP HANA first and then convert to SAP S/4HANA in the cloud.
4. **Go directly to S4/HANA on cloud.** Move to the cloud and transition to SAP S/4HANA in the process.

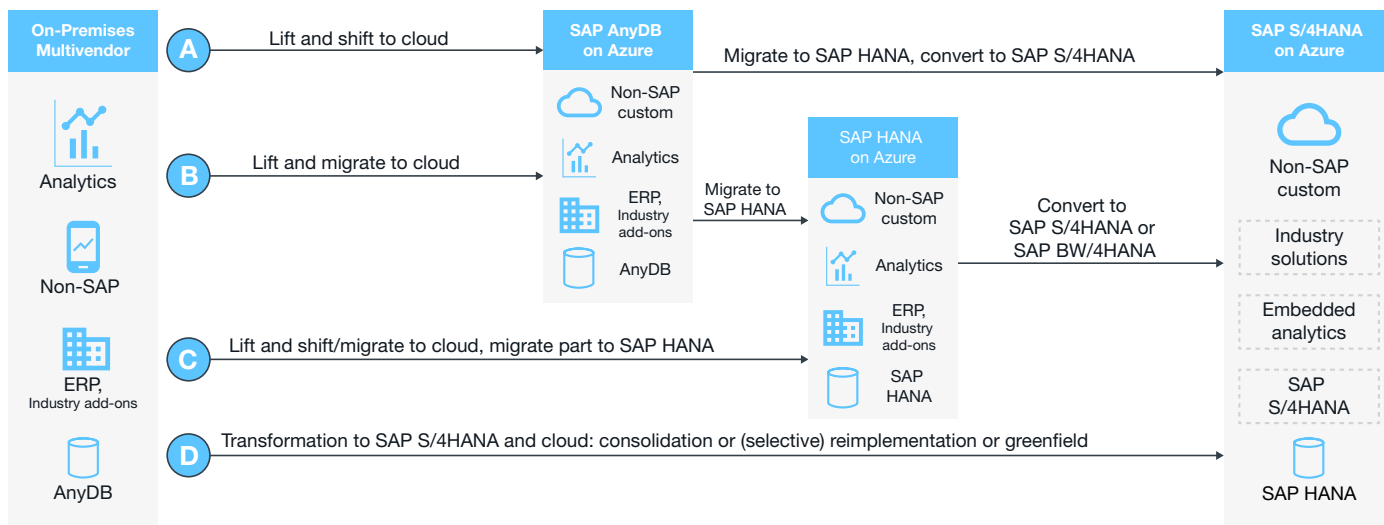


Figure 1) Four key paths to the cloud. All require file storage.

Get high performance and reliability for your SAP landscapes in the cloud

Even with the promise of simplicity and agility, many organizations are hesitant to move their business-critical applications to the cloud. Because cloud infrastructure typically can't handle enterprise data management, IT departments are concerned about performance limitations and data loss. With Azure NetApp Files, you get the benefits of the cloud with the enterprise data management features that organizations have come to expect from on-premises deployments.

Typical SAP deployments in the cloud have limited scalability and downtime protection. Built on low-latency NFSv4.1 file storage, Azure NetApp Files is the only independent cloud storage offering in Azure that's certified for use with SAP HANA.

You can scale seamlessly (up and, more importantly, down) to meet your most demanding SAP requirements, with protection against node failure in your cloud-based SAP production environments.

Because Azure NetApp Files uses NetApp® storage systems inside Azure data centers, you get high reliability and 99.99% availability without having to build your own protection models. NetApp Snapshot™ technology enables you to efficiently back up your SAP data in minutes to space-efficient point-in-time Snapshot copies, with near-instantaneous recovery. Because these Snapshot copies are in-place, read-only images of your data, they have no impact on performance. When you need to create secondary copies of your data to protect against site failures, NetApp technology enables you to rapidly move your data across regions. Encryption and access controls also help secure your data from unwanted access or ransomware attacks.

Creating copies of your production database for QA testing or project proofs of concept (POCs) can add

days (sometimes weeks) to the development cycle. With the built-in cloning technology of Azure NetApp Files, you can clone your largest databases in just seconds. Likewise, you can create as many clones of your production database as you want. If a test corrupts the data, you can start again in seconds without affecting other systems.



“Our Azure SAP HANA mandate depends on Azure NetApp Files as the underlying technology to deliver faster backup and restore capabilities. Although we have backup and recovery today, restoring larger systems within 2 hours as opposed to a full day is vital.”

—Global Beverage Company



Accelerate projects and speed time to market

Initially, when it came to the cloud, many organizations had to choose between agility and performance. Cloud infrastructure didn't provide the speed that organizations needed for large landscapes. For this reason, cloud-based solutions have until now been limited to SAP project landscapes and to small-scale production landscapes.

But Azure NetApp Files is built on NetApp storage in the Azure data center with direct network access to compute nodes. So, you get the agility that you need from the Azure experience, plus the ability to achieve extremely high performance with submillisecond latency. With three service levels (Standard, Premium, and Ultra), you can rightsize your storage to meet your SAP landscape requirements. You can also adjust performance dynamically by dialing your capacity up and down, which enables you to optimize for both cost and performance at any given moment. Performance scales with the amount of allocated capacity, up to 4.5GiBps of throughput per volume, so that your performance isn't limited as your dataset grows.

Unlike any other storage service, Azure NetApp Files lets you change both the capacity and the service level so that you can scale cost and performance to target a specific activity. During periods of limited activity, you move to a lower tier; then you dial up performance at peak business times. And you can do it all with data in place—no copies needed.

Performance so fast, you will think that you're on premises

Azure NetApp Files offers the high performance that you need to support the most demanding workloads.

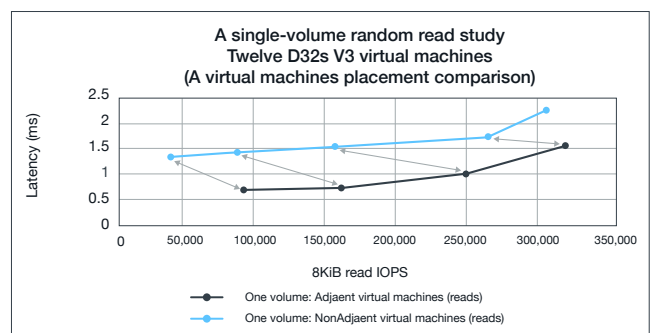
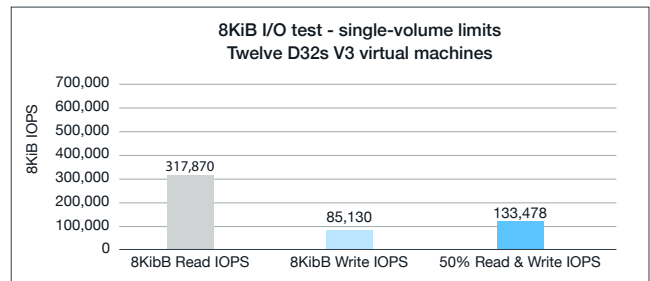
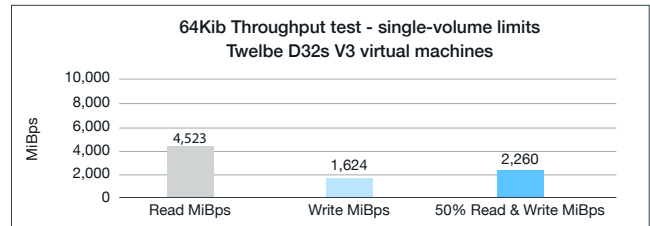


Figure 2) Azure NetApp Files Performance Results (VDBench).

Why you should use Azure NetApp Files for SAP workloads

The Azure NetApp Files storage service is certified for use with SAP HANA. It delivers the high performance, reliability, enterprise data management features, and security that SAP landscapes require—in a fully managed file service environment. Built on NetApp enterprise-class storage, Azure NetApp Files helps you optimize SAP operations by enabling you to easily create and resize volumes. You can also adapt capacity and performance without downtime and create space-efficient Snapshot images and clones in seconds. Hosted in the Azure data center, Azure NetApp Files is directly operated and maintained by Microsoft, so you get high storage performance and ultralow latency I/O.

“We’re a longtime customer and huge fan of NetApp for many of our enterprise applications requiring file-based storage. Azure NetApp Files is both straightforward to use and cost-effective.”

—Semiconductor Equipment Company



Preparing for the Future of SAP

Large enterprises around the world rely on SAP core business applications to process billions of dollars in transactions each year. Any disruption to an SAP landscape carries a high cost to the business. So, SAP teams are reluctant to change their finely tuned deployments—if it’s not broken, don’t fix it.

However, as the industry continues to evolve, change is inevitable. Many businesses are mandating that IT infrastructure and services live in the cloud, and the end of life (EOL) for SAP R/3 software is in the near future. All SAP customers must migrate to SAP S/4HANA, which supports only the SAP HANA database. This imminent change leaves many infrastructure teams scrambling to find a way to move to the cloud and to avoid business risks while retaining the enterprise protections that their operations rely on.

Migrating to SAP S/4HANA in the cloud is the obvious solution, but it might not be that simple. This transition presents challenges, and for file storage in the cloud, some SAP features are missing—and manually building file servers increases management overhead. This “build-your-own” approach results in poor performance and scalability, which means that companies struggle to deliver the fast, flexible, highly available environment that SAP landscapes demand.



Azure NetApp Files is a complete enterprise file storage service from Microsoft that simplifies SAP HANA landscape deployments in Azure. This high-performance file service delivers low-latency file access with the agility, cost efficiency, data protection, ease of management, and enterprise features that you don't get with other cloud storage services. It's a simple, easy-to-deploy solution for complex SAP workloads and is the only independent cloud storage offering in Azure certified for use with SAP HANA.

Learn how Azure NetApp Files can help your organization migrate your SAP landscape to the cloud—starting today!

- [SAP on Azure solution brief](#)
- [Azure NetApp Files for SAP migration page](#)
- [NetApp SAP solutions page](#)
- [Azure NetApp Files page](#)
- [Schedule a migration planning session](#)
- [Blog: Worried about SAP security on Azure?](#)
- [Blog: Time to migrate SAP HANA to the cloud?](#)

About NetApp

In a world full of generalists, NetApp is a specialist. We're focused on one thing, helping your business get the most out of your data. NetApp brings the enterprise-grade data services you rely on into the cloud, and the simple flexibility of cloud into the data center. Our industry-leading solutions work across diverse customer environments and the world's biggest public clouds.

As a cloud-led, data-centric software company, only NetApp can help build your unique data fabric, simplify and connect your cloud, and securely deliver the right data, services and applications to the right people—anytime, anywhere.

