

BUYER'S GUIDE

Time to rethink your storage vendor?

A comprehensive guide for
getting more of what you need
from a hybrid environment





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Change is good

As you evaluate your storage vendor, are you:

- Automatically upgraded to the best solutions?
- Provided a simple, clear, and complete path to hybrid cloud?
- Given the **security, performance, efficiency, scalability, and flexibility** you need?
- Working with a company regarded as an **innovation leader**?
- Working with professionals that offer expertise **across clouds—every cloud**?
- Supported by **service professionals with a deep, broad portfolio**?
- Offered **flexible financial programs** that accommodate a wide variety of deployment models?

If your answer to any of these questions is, “Honestly, I don’t think so,” then it’s time to explore other options.

By separating fact from fiction—and focusing on the buying criteria that matter most to your business—this guide will help you ask the right questions so you can “think twice and act once” and choose the right storage vendor for modernizing your data center. Together with your new storage vendor, you can create a flexible, scalable hybrid storage environment that extends from your on-premises data center to the cloud.



Embracing multi-cloud technology is a critical success factor for data center modernization

A growing number of IT decision-makers believe that the ability to deliver on future multi-cloud goals is essential when purchasing new data center solutions.

97%
of organizations surveyed use cloud-based infrastructure as a service (IaaS) today.¹

80%
of surveyed IaaS users are multi-cloud today—a trend that is accelerating.¹

93%
of respondents say their organization’s cloud migration processes can be meaningfully improved.¹

Storage vendors offering hybrid solutions that support the data center, the cloud, and everything in between can meet their needs today and tomorrow.

Today's storage landscape

Dynamically evolving environment with ever-changing requirements

Regardless of industry, many companies face the same set of issues today—and you might face them, too. For example, are you trying to manage:

- Moving off a soon-to-be-unsupported SAP environment?
- Re-platforming away from Oracle to a more open and modern technology?
- Receiving public cloud bills that are higher than expected?
- Moving thousands of users to a virtual workplace in a short period of time?
- File servers that require long periods of downtime for backups, upgrades, and software patches?
- Compliance issues to avoid large fines?
- Existing storage-area network (SAN) use cases, including Microsoft SQL Server and Exchange, Oracle, SAP, VMware, and SAP HANA; virtualized and core operational databases; and proprietary applications?

Modernizing the data center by creating a hybrid cloud environment is the answer to resolving all these challenges. Snap decisions about how to move forward with data center modernization and hybrid cloud strategy might provide quick results initially. However, you may overlook critical steps in the journey that cause big problems later.

A better solution is to “think twice and migrate once.”



Did you know?

During a recent research study, Enterprise Strategy Group asked IT decision makers which criteria they would classify as very essential or important when it comes to purchasing new data center solutions. The results showed that:

- **92%** identified the need to consolidate cloud migrations with a unified architecture¹
- **89%** identified the ability to deliver on the organization's future hybrid/multi-cloud goals¹
- **88%** identified the need to move workloads to the cloud faster¹

Ask the right questions

Get the right storage partner

A critical part of thinking twice is asking yourself fundamental questions about your data center. The answers will help you understand where your data center stands in terms of modern technology, including hybrid cloud.

1

Is my data center making my life more complex? Has my storage vendor created a complex environment consisting of multiple platforms, numerous data management solutions, and a web of overlapping licensing and maintenance contracts?

2

What effect do data silos have on my business? Is my storage vendor actually a hardware company, offering multiple products that don't work together? Has this approach created data silos that I must manage individually, with data that can't be shared enterprise-wide?

3

How often am I forced to endure disruptive upgrades and migrations caused by my storage vendor, and how long will my storage platforms continue to be supported? Does my storage vendor often initiate disruptive migrations, fueled by continual retirements of redundant products?

4

What is my storage vendor's requirement for purchasing additional software licenses to get to the cloud? Does your storage vendor's cloud strategy include several nested layers of software license fees?

5

As I consider the technology in my data center, how would I rate it in terms of leading the industry or lagging behind? Does my storage vendor offer "me too" solutions? Does the vendor continually push out release dates of new products and solutions?

6

When comparing my cloud to my data center, how alike do they appear? Does my "private cloud" appear more of a cleverly disguised data center? Does it lock me into a closed platform?

7

How would I describe the flexibility of my cloud strategy? Does it allow me to move any workload—even my most critical enterprise applications and workloads—to the cloud when I need to?

What is “data fabric”?

Data fabric is an architecture and set of data services that provides consistent capabilities across endpoints spanning on-premises and multiple cloud environments. By simplifying and integrating data management across clouds and the on-premises data center, data fabric helps accelerate digital transformation. Data fabric is designed to deliver consistent and integrated hybrid cloud data services for data visibility and insights, data access and control, and data protection and security.

Building your data fabric powered by NetApp helps your organization unleash the power of data to meet business demands and gain a competitive edge by:

- Better harnessing the power of hybrid cloud
- Building a hybrid multi-cloud experience
- Modernizing storage through integrated data management



Supporting the use cases that matter most

While other storage vendors offer solutions for critical uses such as virtualization, containers, and consolidation, NetApp is a recognized leader.

#1

Virtualization

NetApp® Virtual Server Infrastructure solutions help maximize the value of your servers. With a responsive virtual server infrastructure built on groundbreaking, high-performance NetApp flash storage systems, you can access your data much faster. Your granular virtual infrastructure scales without disruption to multiple petabytes of data, delivering the performance you need for shared access to multiple workloads.

#1

Containers

NetApp is actively developing tools and innovations that deliver and manage persistent storage for any application, in any location—made possible by containers. One key example of this work is the development of NetApp Trident™, which makes it easier than ever for containerized applications to consume persistent storage on demand. Improve your DevOps workflows using Trident with popular container platforms such as Kubernetes, OpenShift, Docker EE, and Rancher.

#1

Consolidation

With NetApp ONTAP® (the industry's leading enterprise data management software), you can create an environment that is smart, powerful, and trusted—spanning flash, disk, and cloud and ready to handle your future requirements. ONTAP saves you time and money by sharing the same consolidated infrastructure for workloads or tenants that have different performance, capacity, and security requirements. And with ONTAP, you don't have to worry that the activity in one tenant partition will affect another. With multitenancy, a storage cluster can be subdivided into secure partitions that are governed by individual rights and permissions.

What's driving your business?

What benefits do you hope to achieve?

As you consider a new storage vendor, look for one that can:

Simplify your business and your life

A data fabric powered by NetApp simplifies your investment and minimizes financial risk by providing an optimal data platform for your applications today and over the long term. With NetApp, you can optimize cost, risk, and performance. NetApp Active IQ is a digital advisor that simplifies the proactive care and optimization of NetApp storage. Fueled by telemetry data from our highly diverse installed base, NetApp IQ uses advanced artificial intelligence (AI) and machine learning (ML) techniques to uncover opportunities to reduce risk and improve the performance and efficiency of your storage environment. NetApp IQ then provides the prescriptive guidance and actions to make it happen. This “actionable intelligence” simplifies storage administration and leads to higher availability, improved security, and higher-performing storage.

In addition, NetApp Cloud Manager is a centralized management that unifies your siloed storage systems on a single-pane console. You can control multiple NetApp ONTAP storage systems—both on premises and in the AWS, Azure, and Google clouds. With NetApp Cloud Manager, you can empower your IT professionals to meet business objectives with simple provisioning tools. Your IT admins can allocate optimized storage capacity for internal and external customers with automatic capacity scaling.

Remove data silos

To help you thrive in today's cloud-based world, NetApp solutions are built on hardware, software, and services that work together seamlessly both on premises and in the cloud. NetApp solutions enable your global workforce to access all your data, at any time—making the best use of your data as an asset.

Automate updates, upgrades, and migrations

You can trust NetApp to manage and automate your infrastructure on premises and in the cloud—enabling easy and efficient data migrations and modernizations.

Create an easy path to cloud

Rather than force you to use a particular vendor's cloud, NetApp enables you to choose from a wide range of public cloud services, all connected to your data center. Together with NetApp, you can choose which public clouds will best support your business goals—ensuring the required cost, scalability, flexibility, security, and availability.

Deliver industry-leading technology and solutions

To help you experience the best of the cloud, NetApp delivers solutions built for the cloud. NetApp has helped some of the largest companies in the world unlock the best of cloud—public cloud, on premises, and everywhere in between. With NetApp, you gain the confidence of working with a vendor that not only delivers complete cloud offerings, but also continuously innovates and regularly releases new solutions for application lifecycle management.

Provide best-in-class security

With a NetApp hybrid cloud solution, you benefit from secure data access and compliance—reducing the risk of data compliance breaches and the accompanying fines. Embedded security protects your data in the cloud—removing the risk of data breach, loss, and corruption.

Create a flexible cloud strategy

Designed to be change-ready, NetApp's flexible, scalable hybrid architecture allows you to pivot when necessary and as your business requirements evolve. You can move data and workloads from on premises to cloud and back again as needed to meet changing priorities and demands.

Complete portfolio delivers benefits that count

By deploying a hybrid storage environment built on the NetApp portfolio of products and services, you benefit from:

- **Consolidating** all your data across your hybrid environment using NetApp Global File Cache, NetApp Cloud Volumes ONTAP, Azure NetApp Files, NetApp Cloud Backup Service, NetApp Cloud Compliance, and NetApp Cloud Volumes Server for Google Cloud and Amazon Web Services.
- **Protecting** your data by simply turning on NetApp Cloud Backup Service for unstructured data, enhanced by NetApp's partnerships with CommVault and Rubrik, as well as ensuring compliance via NetApp Cloud Compliance.
- **Simplifying** your VDI environment by automating deployment and management of thousands of users with NetApp Virtual Desktop Service, leveraging consolidated data with NetApp Global File Cache, and protecting the data with NetApp Cloud Backup Service and NetApp SaaS Backup Service.

Saving on cloud costs by using:

- NetApp Cloud Volumes ONTAP to compress/reduce the storage footprint by up to **50%**²
- NetApp Global File Cache to cut distributed storage management by up to **70%**³
- NetApp Virtual Desktop Service to cut VDI infrastructure costs by up to **50%**⁴
- Spot by NetApp to slash virtual machine (VM) expenditures by up to **90%**⁵
- Keystone™ portfolio of flexible payment solutions and cloud storage services, designed to minimize upfront cash outlay; with Keystone, you can align costs and usage, budget correctly, curb overbuying and overprovisioning, and enhance flexibility and scalability⁶

² NetApp, [Cloud Volumes ONTAP Feature Spotlight: Storage Efficiency Case Studies](#), October 2019.

³ NetApp, [Consolidate Distributed File Servers with Global File Cache](#), 2020.

⁴ NetApp, [Simplify and automate virtual desktops](#), 2021.

⁵ NetApp, [Spot by NetApp delivers availability, automation, and cost savings](#), September 2020.

⁶ NetApp, [NetApp Keystone](#), 2021.

Best practices for SAN modernization

Your SAN has been the backbone of your data management environment for a long time. It's only natural to feel anxious about changing the platform that manages your data—the lifeblood of your organization. But technology leaps have occurred over the past few years, so it's time to think about modernizing your SAN. Let's start by answering the following questions:

- Are you getting the application performance you need to drive your business forward?
- Are your data center economics moving in the right direction?
- Can your SAN readily adapt to evolving business demands?
- Are SAN maintenance costs rising?

The answers to these questions lead most businesses to realize that their SAN is outdated and needs to be modernized.

NetApp can help at every stage of your SAN modernization. By applying best practices learned during modernization projects of all sizes and across all industries, NetApp designs and delivers modernized SAN solutions using end-to-end NVMe (Non-Volatile Memory Express) with Brocade and VMware.

NetApp storage solutions offer **built-in business continuity** through the advanced capabilities of NetApp SnapMirror® Business Continuity (SMBC), a component of NetApp ONTAP. Simple, fast, and highly reliable, SMBC automatically fails over applications between your primary data center and a replication site—ensuring the applications remain available and your business keeps running.

You also benefit from **built-in application-aware copy data management**, including:

- Faster backup and restores, with on-premises backup and recovery of NetApp ONTAP platforms only
- Efficient application copy data management of backup copies, analytics copies, and test/dev copies
- Support for Microsoft Exchange, Oracle Database, Microsoft SQL Server, SAP HANA, Windows, and VMware, as well as custom support for MongoDB, IBM DB2, MySQL, SAP ASE, PostageSQL, and SAP MaxDB

And finally, you gain the peace of mind of **built-in backup capabilities**, which back up your data to a public cloud object store. Your backups are protected by end-to-end encryption (at-rest and in-flight), and you can choose to store your data in AWS, Azure, and/or Google Cloud (all regions).

In May 2020, a team of researchers from Brocade, VMware and NetApp found that NetApp NVMe solutions delivered a wide range of important financial benefits, including:

40% return on investment

6-month payback period

\$143,000 savings on power and space

\$277,000 savings on administrative costs⁷

Industry recognition

NetApp was named a Leader in the 2020 Gartner Magic Quadrant for Primary Storage Arrays.⁸ NetApp is also ranked highest in three out of four use cases in the 2020 Gartner Critical Capabilities for Solid-State Arrays report.⁹



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⁸ Gartner, Magic Quadrant for Primary Storage Arrays, Santhosh Rao, Roger W. Cox, Joseph Unsworth, Jeff Vogel, November 30, 2020.

⁹ Gartner, Jeff Vogel, Roger W. Cox, Joseph Unsworth, Santhosh Rao, Critical Capabilities for Solid-State Arrays, December 1, 2020.

¹⁰ NetApp All Flash FAS (Fabric Attached Storage).

What people are saying about NetApp SAN modernization

“NetApp AFF is just great.¹⁰ It provides very strong performance on IOPS, as well as very good storage efficiency. My company has been using this product for almost a year with hundreds of VMs deployed using AFF as the SAN. So far, we have not experienced any major bugs, so I would highly recommend this product to other partners.”

—Senior infrastructure manager, retail industry

“The NetApp AFF system is a solid, reliable, and stable product. The Active Architectures gives us the confidence to run the business application on top of it.”

—Infrastructure and operations manager, services industry

“NetApp flash arrays are excellent storage arrays that require only basic skills to provision and administer the storage. Rolling upgrades are very simple without any major outages.”

—Senior infrastructure engineer, healthcare industry

Choosing the right data storage partner

Migrate from a legacy environment to a modern platform with confidence

You want to extract the most value from your data, no matter where it resides—on premises or in the cloud—and a modern infrastructure can help you reach that goal. However, the migration process can be disruptive, complex, time-consuming, and risky. In fact, Gartner predicts that more than 50% of data migration projects will exceed budget and timeline and/or harm the business due to flawed strategy and execution.¹¹ Further, The Enterprise Strategy Group states that 79% of organizations have repatriated workloads from the cloud due to unforeseen issues.¹

The best way to avoid wasted effort and a costly and disruptive data migration is to engage with the service professionals at NetApp. With more than 20 years' experience in data migrations, the NetApp experts follow a proven, repeatable, six-step methodology to ensure migration success:¹²

1. **Scope**—Strategize on the tools, requirements, and architecture.
2. **Initiate**—Assemble the team; plan the project.
3. **Discover**—Assess the current environment; analyze and classify the data.
4. **Design**—Assemble the service workbook; make a transition plan; discuss prerequisites and scheduling.
5. **Implement**—Initiate development tools; cut over from legacy to the new platform; validate that the new environment works as planned; validate all migrated data.
6. **Close**—Deliver documentation and complete knowledge transfer; confirm that the project is complete.

Table 1. Real-world examples of customer successes with NetApp Data Migration Services

Large U.S.-based financial institution	Global oil and gas company	Global financial services provider	Large U.S. retailer	Large European financial institution
Migrated 80TB of data from EMC in just over 2 months—80% faster than the customer thought possible	Migrated 5PB of data to NetApp with zero data loss and zero corruption	Migrated 5PB of data to FlexPod® with minimal business disruption and 10 days faster than proposed by the competitor for migrating to its own solution	Migrated 400+ SAN hosts, 3000+ LUNs, 180TB of data (480+ file shares), and 300 million files to NetApp in just 4 months, with zero performance issues	Migrated more than 406 million files and more than 10,500 file shares to NetApp in just 10 weeks

¹¹ ITConvergence, [Data Migration Planning and Best Practices](#).

¹² NetApp e-book, [NetApp Data Migration Services](#).

Ready to get started?

When it comes to modernizing your storage, you have a choice: Remain boxed in with a traditional storage vendor that offers limited scaling, poorly integrated data protection, and immature cloud offerings; creates operational complexity; siloes data; promotes vendor lock-in; and blocks flexibility—or get more value from your data with NetApp. When you choose NetApp, you can take control of your data and define a long-term, cost-effective cloud strategy, both at the same time.

Remember: NetApp delivers more of what your organization needs to modernize your data center:

- Consolidated approach to cloud migration
- Serverless adoption and edge/IoT-enabling technologies
- Helping you move from opex to capex spending
- A dynamically adjustable cloud storage solution that has significant impact on your overall cloud success
- Cloud solutions that help reduce TCO by more than 25%
- Reduced infrastructure and database software costs

NetApp experts can help accelerate your data center migration, reduce risk, eliminate or minimize disruption, and ensure your data center is cloud-ready. Ask us about our no-cost Dell migration programs.

Think twice, migrate once with NetApp
netapp.com/dell-vs-netapp/



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. To learn more, visit www.netapp.com.

