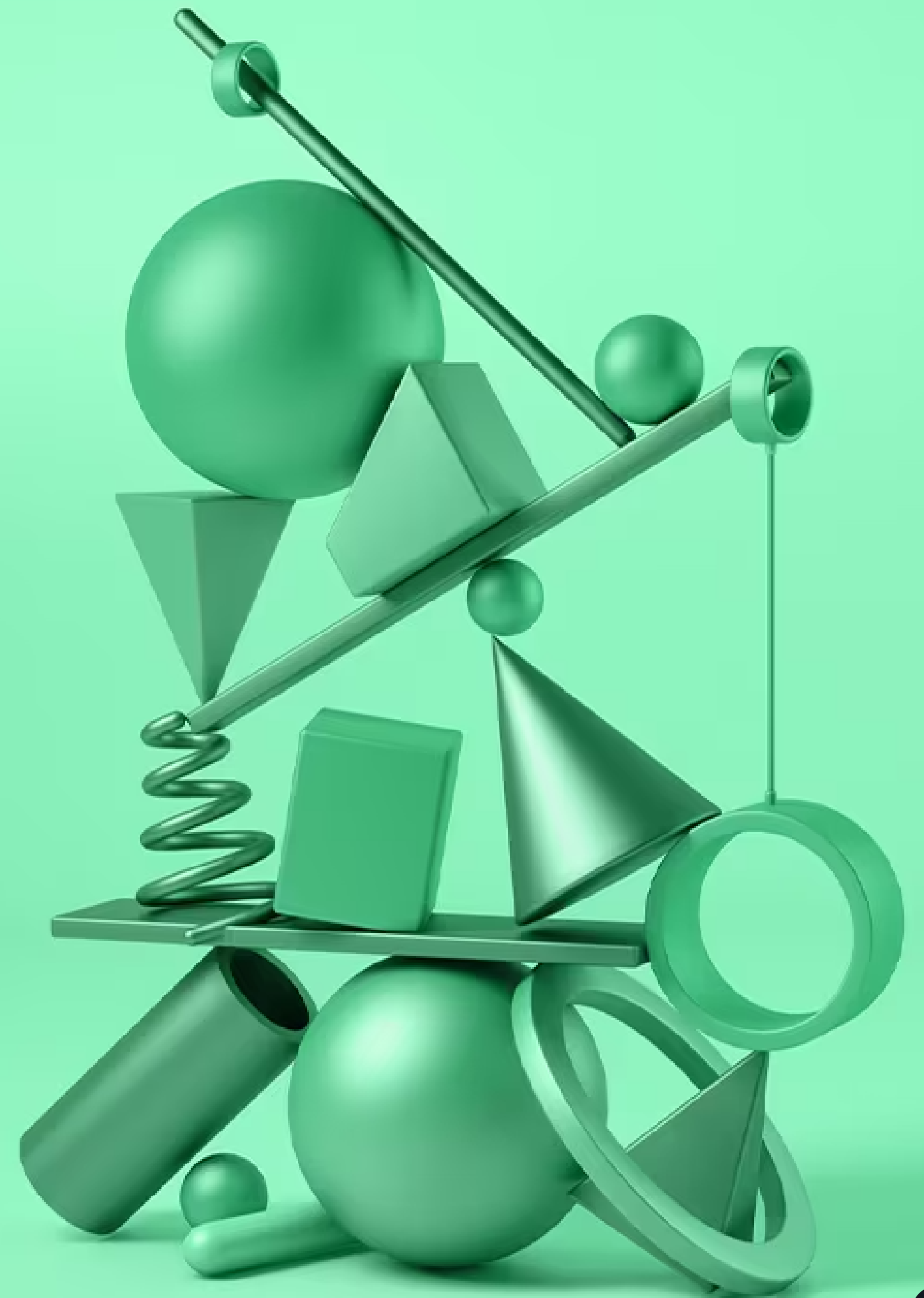


E-BOOK

8 steps to tame multicloud complexity

The ultimate guide to cutting cloud costs
and reducing data requirements with
multicloud storage and data services

 **NetApp**



Contents



Today's cloud landscape

Who knew that life in the cloud would be like this? Moving critical workloads to the cloud helped reduce costs, improve agility, and streamline application and data management. However, many IT teams don't realize that after data and applications move to the cloud, the real work begins.

Maturing multicloud ecosystems introduce new pressures and challenges, from managing a tangle of hundreds of cloud providers to navigating the realities of data sprawl. And even worse, Finance is demanding that you find a way to bring cloud costs under control at a time when data is being created faster than ever.

Store more with less. No problem, right?

Not only are those responsible for day-to-day multicloud operations feeling the heat to keep everything running smoothly, but cloud costs are taking a bite out of the bottom line. No one wants that. However, there's some good news: These challenges can be managed. Let's explore how multicloud storage and data services can lower cloud costs, reduce data requirements, and help you tame multicloud complexity.



Is it time to rethink your multcloud storage?

With multcloud data management and storage, many businesses face the same set of issues today—and you might face them, too. For example, which of these challenges are you trying to manage?

- **Rising** cloud costs at a time when your organization is reducing spending and focusing on efficiency
- **Fast-growing** data needs that outpace your storage budget
- So much data that you don't know what you have or where it resides, which makes it **difficult** to capture the value of your organization's information or protect your data effectively
- **Growing** concern about the intersection of your data management practices and regulatory compliance risk
- **Anxiety** about the threat of data breaches
- **Challenges** keeping track of globally distributed servers and data
- **Complex** multcloud ecosystems that are difficult to manage and take significant amounts of staff time to oversee
- The **inability** to automatically provision applications to best support data access and performance

File storage is the fastest growing cloud storage segment. And it's the storage of choice for the business world's most demanding use cases such as artificial intelligence (AI), big data, high-performance computing (HPC) applications, and tier 1 enterprise applications. When applied to your multcloud environment and its unique needs, the right multcloud storage and data services can get workloads the resources they need with continuous automation and optimization.



You can reduce waste and boost your cloud return on investment (ROI) while keeping costs in check and shrinking your data footprint. And you can detect and prioritize threats with actionable compliance, remediation, and prevention measures before they affect your cloud environment.





Multicloud data management by the numbers

- More data is created per hour today than was created per year **2 decades** ago.¹
- Enterprise data is expected to grow **24%** over the next 12 months, whereas storage budgets only grow **12%**.²
- Only **32%** of data available to enterprises is put to work. The other **68%** goes unleveraged.¹
- **84%** of businesses don't have the data platforms they need.³

We're creating more data than ever before. But data creation is quickly outpacing storage budgets, leaving companies without access to their most important assets and at risk for data breaches and compliance issues.

¹ Seagate Technology, "Rethink Data: Put More of Your Business Data to Work—from Edge to Cloud," 2020.

² 451 Research, "Optimized Cloud Storage Economics," accessed October 2022.

³ Accenture, "Why you need to capitalize on the rise of the data-driven enterprise," May 2021.



The right questions: Are multcloud storage and data services right for you?

To solve the evolving challenges of today's multcloud landscape, it's critical to ask the right questions. If the pain points we just listed are like the ones keeping you up at night, it's time to explore some questions about your current environment and storage strategy. Consider the following questions:

- 1 How well are your current cloud providers meeting your needs to make your critical applications and workloads available and scalable? What are your plans for scaling your file storage?
- 2 What could you do this year if you saved money on your storage costs? Are rising cloud costs a concern in your organization?
- 3 How much new data are you creating? Are your storage infrastructure and budget keeping pace?
- 4 Do you have a current, accurate picture of the data that you own—including what it is, where it resides, and any compliance or security concerns?
- 5 Are you capturing the full value of data for your business?

- 6 What would it mean to your developers' productivity if they were able to provision storage faster or more easily?
- 7 Do you have an increasing number of file servers distributed around the country or world?
- 8 How much time does your team spend managing your multcloud environment each day, week, or month? Could that time be better spent elsewhere?
- 9 Can your tools connect your data sources all in one place for deeper operational visibility?

If you found yourself nodding along and recognizing some of your biggest multcloud data management pain points, there's good news. NetApp can help.



Did you know?

High-performance, secure file services for business-critical workloads can:

- Cut cloud storage costs by more than **60%**⁴
- Reduce data requirements by up to **96%**⁵

⁴ NetApp Cloud Central, "Google Cloud Calculator," accessed October 2022.

⁵ NetApp case study, "Concerto Cloud Services," 2017.



Multicloud storage and data services: Easy-to-manage and affordable

What's the solution? Today's technology combines easy-to-manage, affordable solutions that support storage at the file level and enable companies to make the most of their data across hybrid and multicloud ecosystems.

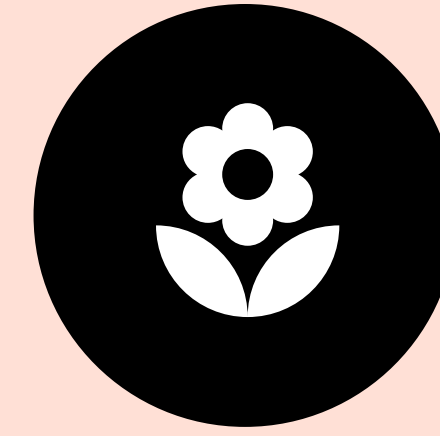
File storage is a critical component of every multicloud strategy. In fact, file services are the preferred types of storage for big data applications, AI, machine learning (ML), and HPC applications. With the increasing need for data mobility, and the desire to colocate datasets and workloads, file storage is simply better—easier to use and more accessible than other types of storage.

File systems still provide the best combination of performance, usability, and scalability for many workloads. Key automation features and improved data management tools can streamline day-to-day storage and multicloud management workflows.

These benefits underscore why multicloud file storage services are growing **200 times faster** than object or block storage.⁶ In the face of this rising demand for affordable file storage, NetApp provides enterprise-grade storage with multicloud mobility that can drive down cloud storage costs and bolster cyber resilience.

And what's critical for multicloud environments: Only NetApp supports your choice of clouds. AWS, Microsoft Azure, and Google Cloud all trust NetApp to deliver outstanding performance and security, and have worked closely with NetApp to develop built-in tools that integrate with—and across—their clouds with ease.

⁶ IDC



Although multicloud complexity and cost continue to grow, they can be managed. Let's take a look at how these services can address your most pressing challenges.



Solve your 8 most important multcloud challenges

1

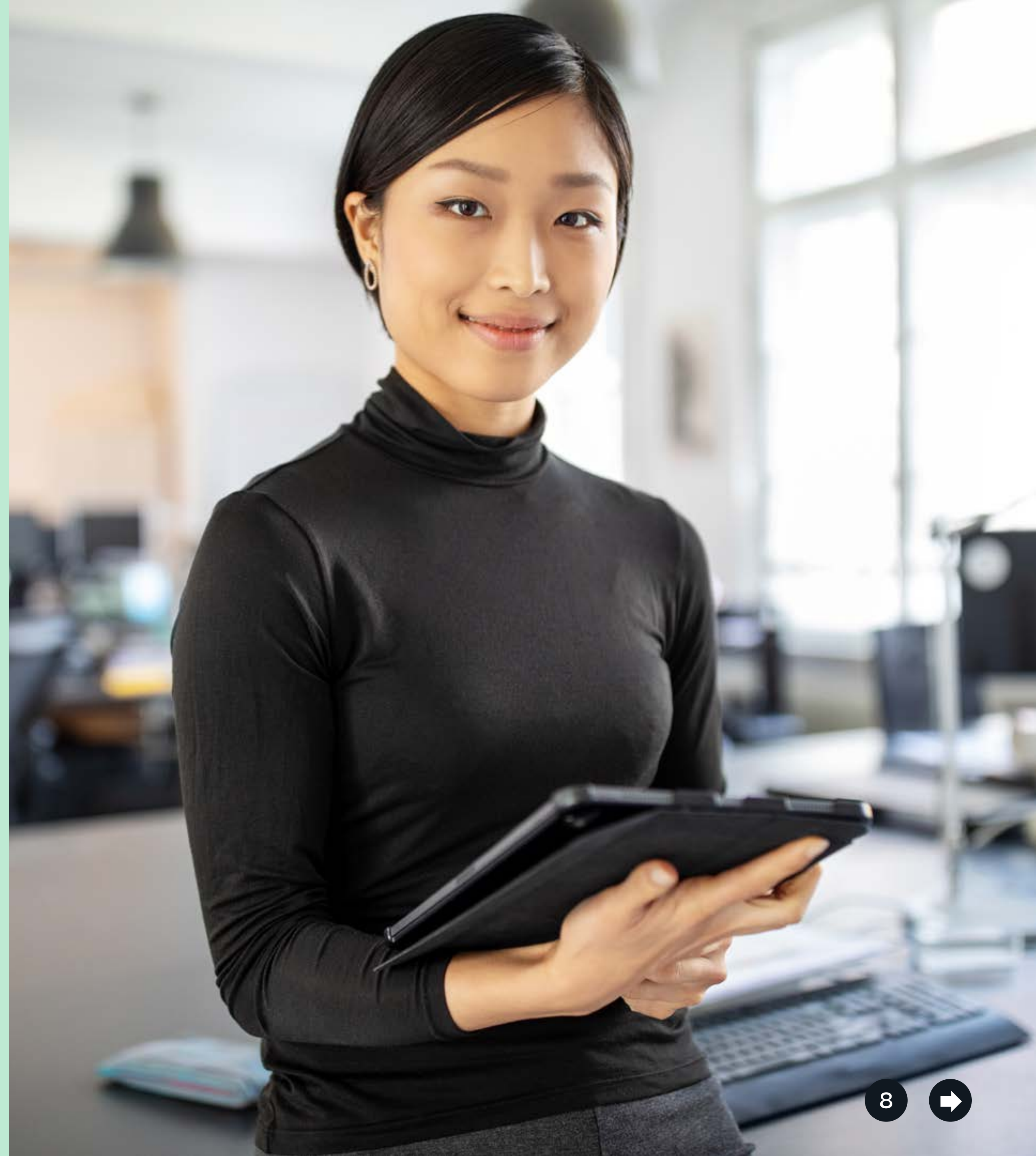
Challenge:

You don't know what data you currently own, where it's stored, or what it is.

Solution:

Take inventory of your current data with tools that make it easy to discover, map, and classify your data. NetApp® Cloud Data Sense scans structured and unstructured data to give you a clear understanding of what data you have and where it resides. Using AI, natural language processing (NLP), and ML, Cloud Data Sense performs a comprehensive scan of your entire multcloud environment.

Think of it like x-ray vision that gives you insights into what's happening with your data, actionable insights for how to remediate problems, and the ability to use automation and controls to support your data privacy and compliance objectives. With a full inventory of your connected data sources, it's possible to use the big picture of your organization's data to optimize your data management and resource allocation. With advanced controls and real-time reporting, it's possible to transform your multcloud data management and governance.



2

Challenge:

You need to ensure that your applications have the resources they need for optimal performance.

Solution:

In a multicloud environment, keeping track of your data and workloads can be like herding cats and dogs 24/7. Implementing an enterprise-grade storage solution that integrates with the major hyperscalers can help you prioritize and optimize your data needs for multicloud workloads and applications.

[NetApp Cloud Volumes](#) is a software-defined storage solution that's offered as a self-managed platform or a fully managed server and delivers advanced data management for file and block workloads. Optimize your cloud storage costs and increase application performance while enhancing data protection, security, and compliance.

3

Challenge:

Prioritizing and optimizing storage is essential, but you don't want to manually manage provisioning around the clock.

Solution:

Provisioning storage can become a full-time job in today's complex multicloud environments. It's not the most exciting work, nor the most strategic use of your IT team's talents. With NetApp solutions, deliver unified services across environments while consolidating and streamlining operations into a single platform. You get point-and-click simplicity that reduces complexity and saves your team time and money.

These solutions offer more than visibility; it's also possible to automate provisioning by using software-defined methodologies and policies. [NetApp BlueXP](#) provides unified management of multicloud environments, so you can discover, deploy, and manage on-premises and cloud-resident NetApp ONTAP® systems and operations seamlessly and consistently.



4

Challenge:

You want to simplify consumption, but it's important to stay on budget too.

Solution:

Simplify provisioning and consumption of your data services across multiple clouds in the face of dynamic workload requirements. At a time when IT teams are being asked to do more with less, it's critical to meet performance needs. But you also have to stay accountable to finance—and the right tools can help.

Stay on budget with [NetApp BlueXP](#), a feature that supports flexible consumption. It enables you to deploy smaller workloads without large upfront investments, so you can scale costs as your workload needs grow and evolve.

5

Challenge:

Your data capacity needs are outgrowing your cloud budget. But your data creation isn't slowing down.

Solution:

The pace of data creation is only going to increase. However, that creates tension at a time when there's so much scrutiny on budgets across the organization. Win fans in Finance by getting a more nuanced understanding of your organization's data landscape so that you can tier your data. Data tiering enables you to prioritize critical data and use lower-cost storage options for archived or rarely accessed data—which can translate into smart savings.

[NetApp Cloud Tiering](#) provides intuitive management of unstructured data by placing your cold data at the right tier, at the right time, and according to your defined policies. Gain cost savings from a single point of control, along with the flexibility to set it and forget it.

With NetApp Cloud Tiering, tier your data in any cloud according to policies. Differentiate between hot data that you need immediate access to and cold data that's infrequently accessed. Integrate your data into a single file system that leverages object storage repositories in the clouds (including S3, blob, and cold store).

6

Challenge:

Your deployment environment needs to meet your standard requirements in a way that's streamlined and simple.

Solution:

Standardize resource creation in your working environments. Templates make it easy for your storage administrators to create volumes that are optimized for the workload requirements for each deployed application, including databases, email, and streaming services. This approach makes life easier for your storage architects—they'll know that each volume is created optimally for each application from the start.

NetApp Application Template service—freely available to all NetApp BlueXP customers—enables you to deploy standard resources across environments. The service provides an infrastructure-as-code experience for those who want to automate complex deployments while keeping resources in compliance with corporate standards.

7

Challenge:

You have data servers and files around the world. It's hard to plan for issues like continuity, security, compliance, and efficiency and monitor all these locations effectively.

Solution:

Multicloud storage and data services are often distributed globally, across locations and providers. Excessive growth of unstructured data and the inability to centrally manage those datasets is one of the biggest issues that IT teams are wrestling with today. Most organizations struggle to manage unstructured data because it spans multiple locations (known as data islands). Over time, you end up with a complex environment that's expensive and time consuming to manage and can create performance issues.

This complexity can create anxiety about your ability to meet compliance regulations, efficiently perform audits, deal with data loss, and effectively respond to a breach. By consolidating distributed file servers into a single global enterprise file system, you can centralize control of your entire storage footprint, simplify access for users, and get back online quickly when needed. Ultimately, this approach can help tame cloud complexity and give you the peace of mind that your data is under control, protected, and available efficiently and cost-effectively.

NetApp Cloud Volumes ONTAP Cache works in concert with NetApp Cloud Volumes ONTAP and enables you to create a secure, consolidated instance of storage that replaces hundreds of distributed file servers. It's structured with a global namespace, edge caching, and file locking so that end users can access a centralized cloud datastore and IT administrators can save critical management time.

8

Challenge:

You need to manage and secure a complex multicloud environment to deliver reliable performance on your applications around the clock.

Solution:

Uptime is everything. You can only capture the value of your data and applications if you can access them. But the reality is that managing and securing your entire multicloud environment 24/7/365 is a big job. Add the difficulties of doing this across multiple clouds, and you just amplify the complexity.

With an infrastructure monitoring tool that unites everything into a single pane of visibility, it's possible to monitor performance in real time and access the forensic data needed to troubleshoot issues.

NetApp Cloud Insights is a software-as-a-service-based monitoring tool that gives you complete visibility into your infrastructure and applications. With Cloud Insights, you can monitor, troubleshoot, and optimize all your resources and applications across your entire technology stack, no matter where it resides. Whether you're identifying unused or idle resources to reduce spending or utilizing a tool to plan a data migration, deeper visibility through infrastructure monitoring gives you the tools you need to optimize operations.





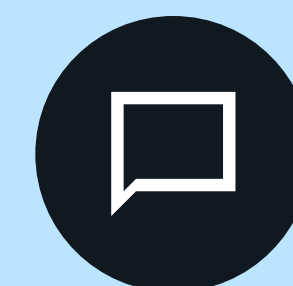
Are you ready to get started?

If you want to reduce costs and data requirements while maintaining performance and reliability in multicloud environments, partner with NetApp. Sure, you can continue trying to manually tame the complexity of a fast-growing, massive data ecosystem—or you can get more value from your data by taking advantage of NetApp insights, automations, and policy-based controls.

When you choose NetApp, you can take control of your multicloud environment and achieve your most important goals, from cutting costs to reducing your data footprint. Remember: NetApp delivers what you need to take charge of your cloud, including:

- **Cutting** cloud costs by up to **60%**
- **Reducing** data requirements by up to **96%**
- **Taming** complexity with tools that help you map your data, classify it, and manage it with policies
- **Streamlining** data management and provisioning with automated solutions, which offer the ability to start small and scale workloads over time
- **Advanced** security, compliance, and business continuity solutions built in to create greater resilience across the multicloud environment

NetApp experts can help solve your most pressing multicloud storage, data services, and data management challenges.



Start the conversation today to arrange a meeting with a NetApp expert.

www.netapp.com/cloud-services/multicloud/

About NetApp

➔ Learn more at www.netapp.com



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.



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