ESG SHOWCASE

For Enterprise-Caliber Cloud File Storage, Look to NetApp

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ABSTRACT: Achieving a cost-effective cloud strategy is next to impossible without compute optimization and storage efficiency optimization of an organization's public cloud environment, and this requires understanding that all technologies are not created equal. For more than just basic, native cloud file storage, organizations should consider NetApp® Cloud Volumes ONTAP®, which offers truly advanced, enterprise-grade, multi-protocol capabilities designed to optimize and maximize the value of new and hybrid cloud storage environments.

Overview

Cloud storage plays an essential role for nearly every business. In one ESG survey of IT decision makers, 67% of respondents reported that their organization now uses some form of public cloud storage infrastructure.[1] And among cloud infrastructure users, public cloud *file storage* continues to gain adoption; 42% expect to accelerate their cloud file storage investments over the next 24 months.[2]

However, despite wide adoption of cloud storage, most data remains on premises. Only 1% of surveyed organizations are keeping more than 50% of their data capacity in a public cloud, while 51% say they place 30% or less on public cloud infrastructure services. That discrepancy persists, even though IT decision makers are twice as likely to identify cloud storage as being superior to on-premises options in terms of speed, ease of storage purchasing, and total cost of ownership.

So, almost all organizations use the cloud for some workloads to some degree. But what is preventing their increased adoption of cloud file storage? It is likely the discrepancy between the extensive needs of today's enterprise file workloads and the rather bare-bones features that most common cloud file storage options can offer.

Enterprise file-based workloads have evolved in recent years. No longer are they relegated to a secondary storage tier that is big but slow. Modern file-based workloads are still big, certainly. But they are also often mission critical now. Therefore, they need speed, enterprise-level availability, easy management, and strong protection.

To maximize the value of cloud infrastructure, lower TCO, increase ROI, and be able to use file data for business innovation, organizations need the option to leverage cloud file storage *for tier-one file workloads*. NetApp, a leader in cloud storage technology, offers Cloud Volumes ONTAP—an enterprise-caliber cloud file storage solution that makes the cloud a feasible option for any tier-one file workload. Cloud Volumes ONTAP improves the capabilities and the efficiency of both new and existing cloud environments.

[1] Source: ESG Research Report, *2020 Technology Spending Intentions Survey*, February 2020.
[2] Source: ESG Master Survey Results, *2019 Data Storage Trends*, November 2019. All ESG research references and charts in this showcase have been taken from this master survey results set, unless otherwise noted.

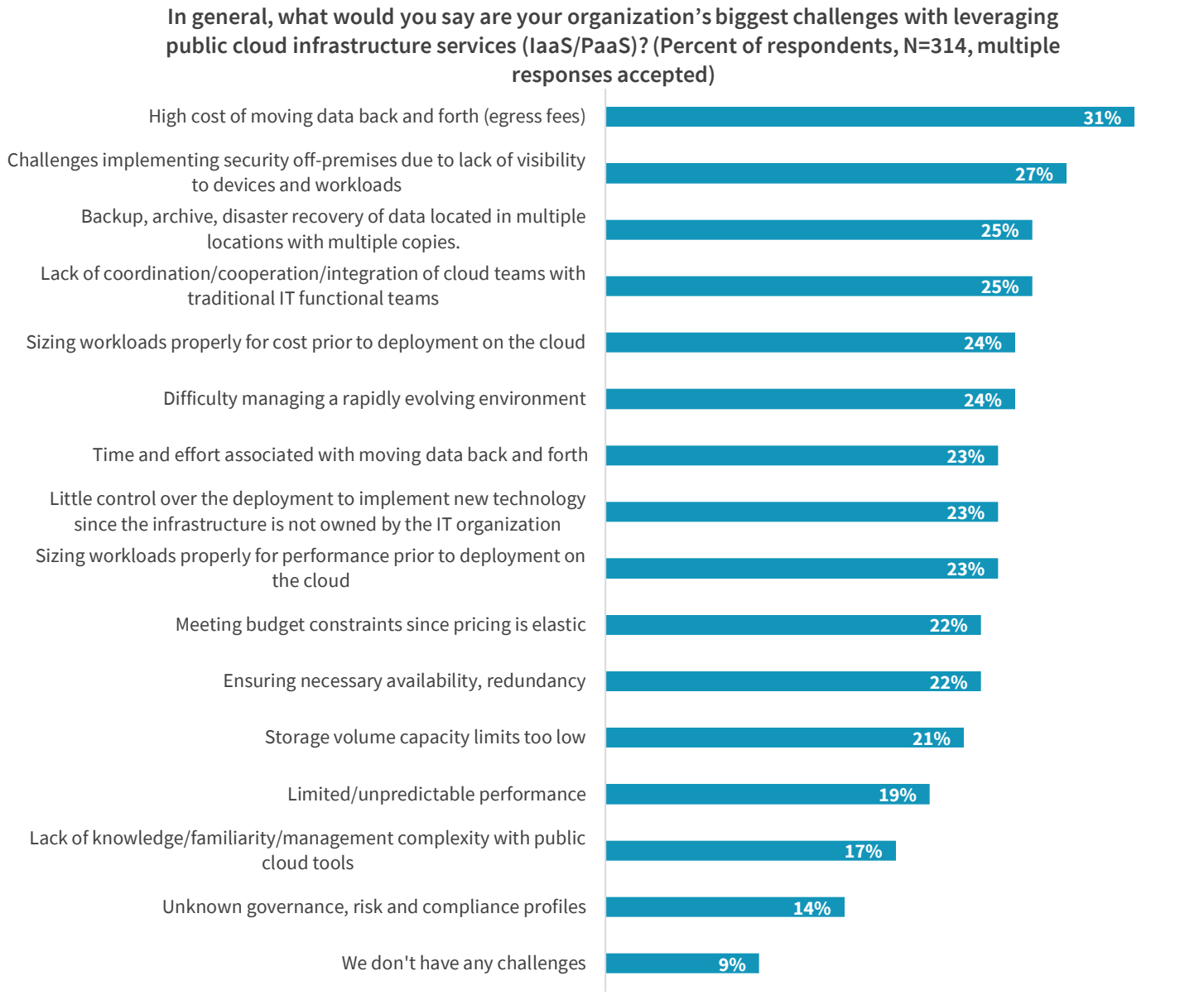
Public Cloud Storage Realities Are Holding Enterprises Back

ESG research highlights the common complexities associated with leveraging public cloud storage. Overall, nearly two-thirds of surveyed IT decision makers (64%) consider IT in general to be more complex than it was just two years ago. And more than a quarter (26%) of those that called IT more complex identified the need to leverage both on- and off-premises infrastructure as one of the top drivers of that complexity.[3]

The addition of something new and different invariably fuels complexity. IT organizations need consistency, commonality, and simplicity in order to keep that complexity (and costs) under control. In addition, they need assurance that they have the necessary features and functionality at their disposal to support both existing and future demands.

Figure 1 highlights common challenges linked to leveraging cloud infrastructure services.

Figure 1. Top Challenges with Public Cloud Infrastructure Services



Source: Enterprise Strategy Group

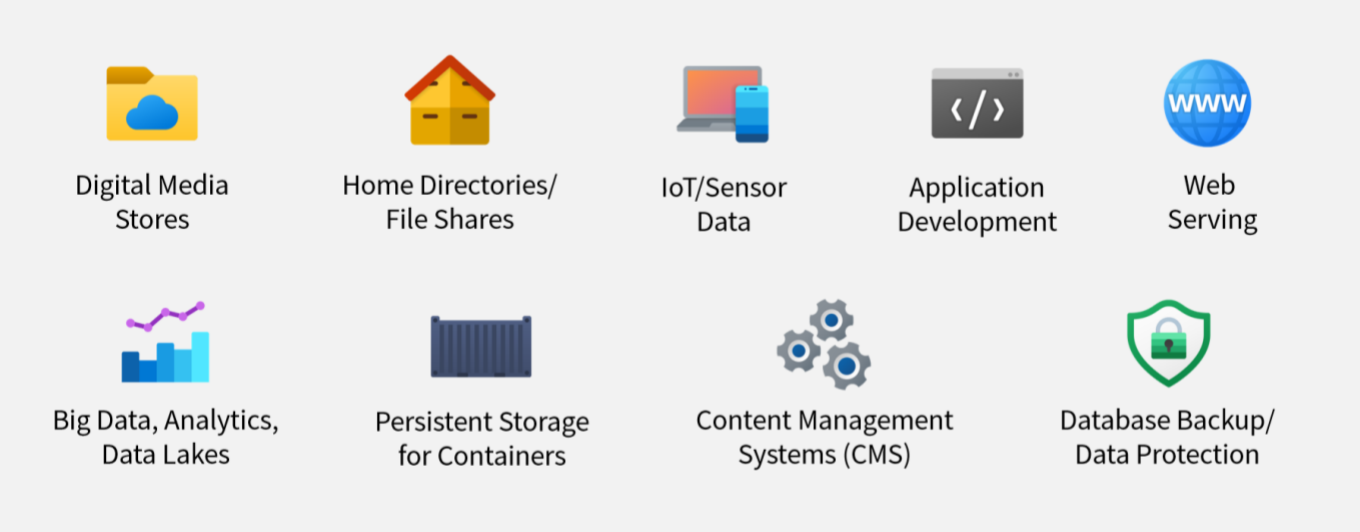
[3] Source: ESG Research Report, *2020 Technology Spending Intentions Survey*, February 2020.

Fortunately, organizations can use certain cloud file storage capabilities and features to overcome many of these challenges, ultimately making it possible for them to optimize cloud storage and dramatically decrease cost- and complexity-related problems.

Use Cases for Cloud File Storage

The flexibility to support and easily integrate with existing applications as well as the ease to deploy, manage, and maintain a file storage solution in the cloud support a broad spectrum of applications and verticals. Potential use cases for cloud file storage extend from traditional file shares and home directories through protection to production applications and repositories for digital media content. Cloud file storage has also found adoption as a data lake environment that serves a host of digital initiatives, including analytics, machine learning, and IoT environments.

Figure 2. Example Use Cases for Cloud File Storage



Source: Enterprise Strategy Group

Lessons in Architecting and Optimizing Existing and Future Cloud File Storage

Here are the key—even essential—capabilities to look for if your goal is to fully optimize your environment for cloud file storage:

- Predictable, consistent performance and availability.
- Enterprise-level data protection and data reuse features (e.g., snapshot capabilities).
- Multi-protocol flexibility, specifically for Windows, Linux, and S3.
- An ability to adjust and adapt with changing workload needs.
- Eliminated or minimized egress fees.
- Multi-application support.
- Multi-cloud-level consistency in functionality and experience.

NetApp Cloud Volumes ONTAP

NetApp Cloud Volumes ONTAP has been an established leader in cloud storage for close to a decade. NetApp, relative to other on-premises enterprise storage providers, was early in extending its technology to public cloud infrastructure services, a strong case for NetApp as a thought leader in the industry. NetApp has continued to enhance its capabilities, simplify management across hybrid cloud, and establish its enterprise-level resiliency on public cloud infrastructure.

NetApp Cloud Volumes ONTAP possesses all the essential cloud storage capabilities. It was purpose-built to deliver:

- Consistent, reliable performance in the cloud.
- Integrated Snapshot™ copies to improve application availability, and instant copies to accelerate application development.
- Multi-protocol flexibility (e.g., Linux(NFS), Windows(SMB), and iSCSI) for archiving to AWS S3 Object to optimize costs based on performance and capacity. NetApp's unified approach for multi-protocol storage takes care of EBS, EFS, and FSx all in one, and it can tier cold storage to S3 while ensuring easy retrieval as needed.
- Enterprise-grade reliability of the dedicated resources.
- Automated resource allocation, with the ability to change service levels, size workloads, and reduce/optimize the overall cloud storage footprint.
- A multi-application design—NetApp delivers enterprise-grade storage for hundreds of use cases to run file shares and block-level storage serving NAS and SAN protocols (e.g., NFS, SMB, and iSCSI), support for disaster recovery, Microsoft workloads, DevOps, databases, or any other enterprise workload.
- Optimized infrastructure costs, with guaranteed SLAs for performance, durability, and availability.
- No need for refactoring—No IT administrator likes having to refactor data or rearchitect the environment just because there were no robust file services in the public cloud like the ones they've grow accustomed to in their data centers.

Cost Optimization Can Go Beyond Storage Efficiency in the Cloud

Since data is one of a business's most vital asset and must be optimally stored, managed, and protected, it's important to have a cloud platform that can address the needs of an application-driven infrastructure. Fulfilling these demands includes enterprise storage functionality, but it also extends beyond the ability to store file data and support basic protocols.

Modern organizations need a unified platform that can support public cloud storage infrastructure and deliver the needed data services, like the ability to optimize compute and storage while achieving visibility and insight into data security, compliance, and other key metrics.

NetApp has augmented its Cloud Volumes ONTAP with a wealth of optional services capabilities, including:

- Spot by NetApp leverages machine learning technology to automatically understand changing application demands and then tune to the performance, availability, and efficiency needs of the underlying infrastructure to meet those demands, thus significantly reducing cloud infrastructure costs.

- Cloud Insights and Cloud Secure provides monitoring tools for visibility into both applications and infrastructure in the data center and the cloud. This technology can provide early detection of ransomware.
- Cloud Compliance leverages advanced algorithms to deliver automated controls for data privacy regulations such as GDPR and CCPA.
- Global File Cache helps organizations simplify and reduce the cost of their branch office server and storage assets by leveraging the cloud to consolidate data storage and then using software to create a file cache layer for active or hot data sets, optimizing performance across globally distributed offices.

The Bigger Truth

The public cloud hyperscalers offer organizations native file services that certainly do work as intended, but they are for the most part adequate services that were created "for the masses." NetApp has been perfecting block and file support in the data center and within the cloud for years. If you have not tried Cloud Volumes ONTAP for AWS, now is the time.

And without question, the cloud providers want NetApp there. They know that NetApp's solutions are enterprise grade and fully able to help any customer organizations that have advanced requirements for file storage efficiency, reliability, and regulatory compliance.

With Cloud Volumes ONTAP, you set it and forget it. You do not need to spend time worrying about the cloud storage layer. You do not need to entertain the painful prospect of repatriating workloads back on premises just to regain enterprise-caliber file storage. There's another, much better option.

These days, businesses leverage the cloud for far more than just backup or disaster recovery; moving tier-one file workloads to the cloud and maintaining them properly off premises is necessary to achieve innovation, reduce TCO, and increase ROI. This is "cloud 2.0," and it is centered on ubiquitous enterprise storage in the cloud, and across clouds. Modern cloud environments are built across multiple sites, multiple providers. Cloud decision makers need to work with technology leaders that can deliver consistency and enterprise capability across a broad and diverse cloud ecosystem.

NetApp is a leader in enterprise cloud solutions, offering data protection and storage efficiency features and that essential level of consistency across all the major cloud environments such as AWS—and even for hybrid and multi-cloud deployments. Regardless of where your organization is in its cloud journey, NetApp should be on the short list of providers you consider.

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