EBOOK

Four Challenges of Storage in the Cloud

PURESTORAGE®
Uncomplicate Data Storage, Forever

Introduction

The move to the cloud has been marked by enthusiasm for its promises of agility, scalability, and cost-efficiency. Yet many organizations are struggling to make good on those promises as they face challenges to mature in a hybrid and multicloud world.

The complexities of managing cloud resources, coupled with unforeseen costs, have led some businesses to reevaluate their cloud strategies. Issues such as unexpected expenses, difficulties in optimizing resource utilization, and challenges in aligning cloud solutions with specific business goals have emerged. Additionally, concerns related to data security, compliance, and the intricacies of migrating legacy systems to the cloud contribute to the growing realization that the cloud journey is not without its hurdles.

Organizations are now at a crucial juncture—re-assessing their cloud and infrastructure strategies—so that they can establish the right fit for infrastructure technologies within the enterprise landscape, regardless of where that infrastructure lives.

When it comes to storage specifically, there are four key challenges that storage in the cloud presents.

CHALLENGE

The Growth of Digital Data

According to IDC, the global data volume is expected to grow by 30% annually. With the exponential increase in digital data, managing and storing information efficiently becomes a daunting task. Data proliferation leads to higher storage requirements, increased complexity, and potential security risks. Implementing effective data lifecycle management practices involves categorizing data based on its importance, establishing archiving policies, and enforcing deletion procedures to optimize storage resources and maintain data security and compliance.

Data deduplication and reduction play a pivotal role in optimizing storage resources and enhancing operational efficiency. Data deduplication, a process that eliminates redundant copies of data, and reduction techniques significantly contribute to addressing this dilemma. This not only allows organizations to cope with the escalating volumes of data but also facilitates quicker data backups, reduces network bandwidth requirements, and accelerates data retrieval processes. In essence, data deduplication and reduction are indispensable strategies for organizations seeking to optimize their storage infrastructure, mitigate the challenges of data proliferation, and ensure a more cost-effective and streamlined approach to data management.

While common in enterprise storage hardware, data deduplication and reduction technologies are not a part of cloud native storage.

Recommendation: Look to storage specific partners to add these capabilities to your cloud infrastructure strategy.

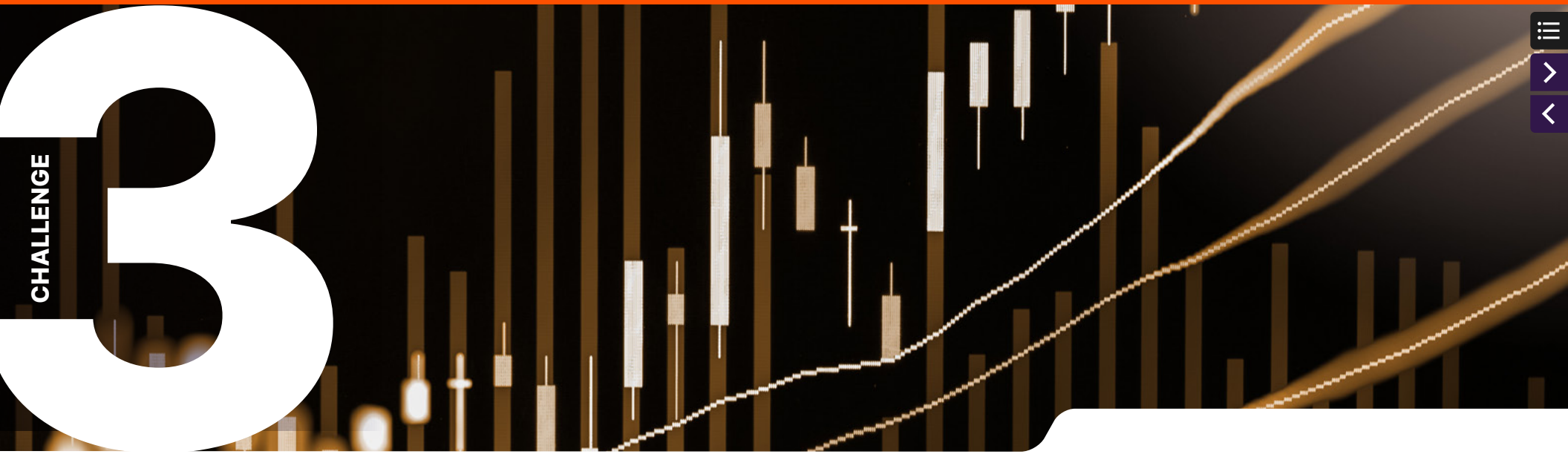
CHALLENGE 2

Bundled Storage Leads to Inefficiency

Cloud-native storage offerings provide bundled options with predefined sets of input/output Operations per second (IOPs) and storage volumes. While this offers a convenient solution for organizations seeking simplicity in their cloud infrastructure management, it can lead to inefficient resource allocation, resulting in wasted resources.

Organizations may find themselves either overprovisioned, paying for more IOPs or storage than they actually require, or underprovisioned, facing performance bottlenecks and the need for costly adjustments. This one-size-fits-all model may not align with the unique demands of diverse workloads and varying application requirements. As a consequence, organizations may need to closely monitor and adjust their cloud-native storage configurations to strike a balance between performance, cost-effectiveness, and the dynamic nature of their data storage needs, ultimately avoiding unnecessary expenses and optimizing resource utilization in the cloud environment.

Recommendation: Explore virtual storage arrays to tune IOPS and storage volumes for specific workload needs.



Rising Cloud Costs

The cloud offers scalability, but the flexibility comes at a cost. Nearly three-quarters of organizations have been notified of a price increase to their cloud storage cost. Not surprisingly, many organizations are struggling with bill shock as they move more workloads to the cloud.

Add onto this the challenges of growing data volumes, lack of data reduction technology, and inefficient bundled storage, and it's not hard to see why IT leaders are struggling to control costs of storage in the cloud.

Recommendation: Compare TCO of alternatives to cloud native storage to understand the real cost of your data storage.

CHALLENGE

4

The Complexity of Hybrid and Multicloud

Managing data storage across hybrid and multicloud environments presents a host of challenges for organizations navigating the complexities of modern IT infrastructures. The integration of on-premises data centers with various cloud platforms introduces issues related to data consistency, interoperability, and seamless data access. Coordinating data movement across different environments while maintaining compliance with regulatory standards adds another layer of complexity. Challenges also emerge in optimizing performance and latency as data traverses diverse networks and cloud providers. Furthermore, ensuring robust security measures across hybrid and multi-cloud architectures requires vigilant monitoring and a cohesive strategy.

The dynamic nature of these environments, with multiple vendors and technologies in play, requires careful planning and ongoing management efforts to achieve a unified, efficient, and secure data storage ecosystem. Organizations are grappling with these challenges to harness the benefits of both on-premises and cloud resources while addressing the inherent complexities of hybrid and multi-cloud storage management.

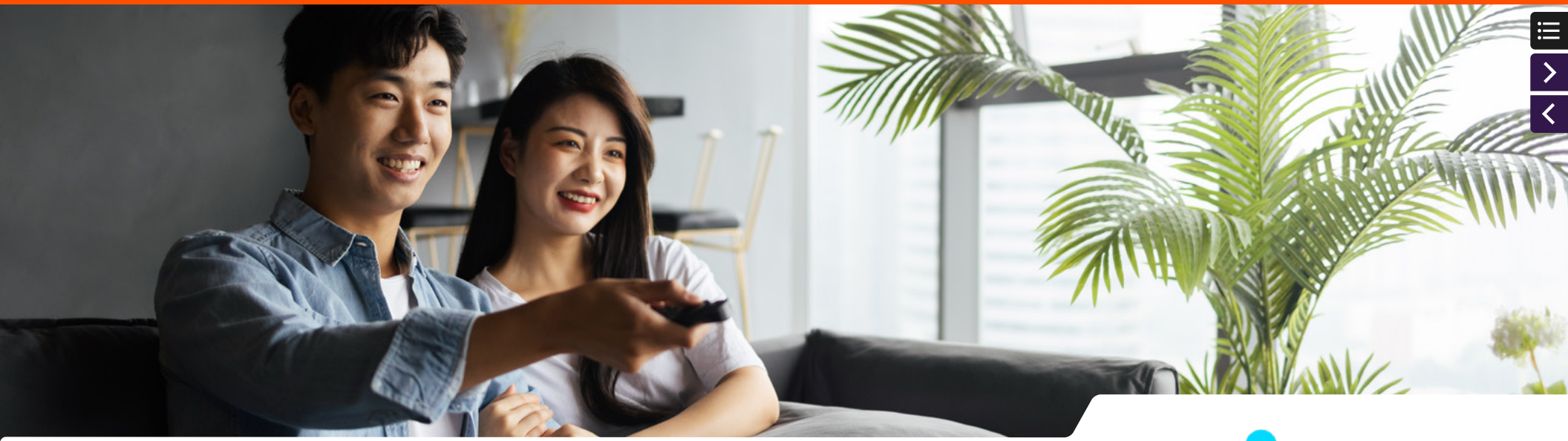
Recommendation: Look to your storage vendor to help you navigate the challenges of moving data between on-premises and cloud platforms.

A Different Approach to Storage in the Cloud

If these challenges resonate with your cloud journey, it's important to remember that you're not alone in navigating the complexities of storage in the cloud. With thoughtful strategies and the right partnerships, these challenges can be effectively addressed.

Embracing data deduplication and reduction technologies, and considering alternatives to cloud native storage alone can help control data growth and storage costs in the cloud. Moreover, collaboration with experienced storage vendors can provide valuable guidance in navigating the complexities of hybrid and multicloud environments as you define your infrastructure strategy.

Below is an example of how IT leaders at Ampersand confidently steered their organizations towards a more streamlined, cost-effective, and secure data storage ecosystem, setting them for long-term success.



Ampersand Adopts Hybrid Cloud to Speed TV Insights

Whether a local or national advertiser, Ampersand helps clients reach their unique target audience and deliver their messages anytime, anywhere on any device—with a commitment to privacy. This requires timely, data-driven insights to help clients capitalize on opportunities.

To speed decision-making, Ampersand adopted a cloud-first strategy that leverages Pure Storage for increased resilience and performance in a hybrid cloud environment. Ampersand benefits from the capabilities and economics that make the cloud ideal for both disaster recovery and on-demand analytics at massive scale—and advertisers can reach their goals more efficiently.

> **"Pure Cloud Block Store proved simple to deploy and manage. From the Pure1® interface, Ampersand can move volumes into the cloud or repatriate data to the physical data center without reformatting data or refactoring applications. Ampersand is consuming less storage capacity in AWS with Pure snapshots, achieving average data reduction rates of 5:1. The company gains better performance, at a lower cost, with complete data portability."**

SETH WEINGARTEN,
VP OF NETWORK OPERATIONS, AMPERSAND

ampersand

Results

Achieves seamless data mobility and replication from on-premises to cloud

Moves DR to the cloud to cut costs and achieves **5:1 mean data reduction**

Migrates transactional database to the cloud for faster throughput

Bring a Storage Expert on Your Cloud Journey

No matter where you find yourself on your cloud journey, you don't have to navigate the path alone. Pure's extensive expertise in storage and its born-in-software approach are the ideal fit for organizations seeking a knowledgeable partner to guide.

Pure Cloud Block Store™—a virtual storage array available in both AWS and Azure—can help you control costs, manage storage across hybrid and multi cloud environments, and simplify data migration. Gain efficiency with a storage solution that's always secured, thin-provisioned, deduplicated, and compressed, allowing you to optimize your cloud spend.

BRING THE BEST OF PURE STORAGE EXPERTISE IN STORAGE TO THE CLOUD AT AN AFFORDABLE COST.

Learn More

PS2542-01-en 12/23