E-BOOK

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CLOUD VOLUMES ONTAP FOR AZURE:

8 CUSTOMER SUCCESS STORIES

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EXECUTIVE SUMMARY

Enterprises that are moving to the cloud have difficult decisions to make when it comes to their storage demands. Will the new cloud platform maintain business continuity and keep data secure? What kind of changes will have to be made to the existing applications to use the storage that's offered in the cloud? And how much will all of it cost?

As a major cloud provider, Microsoft Azure has steadily grown in influence since its debut in 2010. A large part of its appeal is the shared ecosystem with a wide range of existing Microsoft products at work in many enterprises. The advantages of deploying storage in the cloud with Azure are significant, and those advantages are even greater when you use NetApp® Cloud Volumes ONTAP® software as the data management layer for your Azure storage resources.

These enterprise-grade benefits include high availability, advanced data protection, fast migration capabilities, and storage efficiency features. And these benefits are further enhanced when they're paired with capabilities such as NetApp BlueXP™ ransomware protection and BlueXP disaster recovery.

NetApp Cloud Volumes ONTAP runs as an instance on Azure disks to provide you with secure and proven data management capabilities for any workload. You can easily manage file shares and block-level storage serving NAS and SAN protocols, disaster recovery, backup and archiving, DevOps, databases, and persistent volumes for containerized workloads.

To offer insight into why enterprises like yours choose to deploy Cloud Volumes ONTAP for Azure, this guidebook examines several prominent case studies for various business sectors and use cases.

INTRODUCTION

Gartner has forecast that more than half of enterprise IT spending in key market segments will shift to the cloud by 2025. Infrastructure as a service (IaaS) is expected to have the highest growth rate, as enterprises look to the cloud to meet the storage and compute needs of modern applications and workloads.

Corporate IT budgets are spent on cloud services across a wide range of use cases:

Enterprise workloads

The IaaS market grew to $140 billion in 2023, and the public cloud services market will grow to $1.28 trillion by 2028.

Databases

By 2030, the cloud database market is expected to be worth $59.80 billion, having grown by 24.85% during the forecast period (2023–2030).

File shares

On average, an enterprise uses 76 file sharing cloud services, making it one of the fastest growing cloud use cases year-over-year.

Data protection

The estimated market size for cloud backup is $5.71 billion in 2024, which is forecast to grow to $17.29 billion by 2029.

CLOUD USE CASES:
DRIVERS AND BENEFITS

Operational efficiency

In addition to shifting infrastructure management responsibilities from the corporate IT team to a cloud service provider, the cloud boosts operational efficiency in many ways, such as highly automated deployment of applications and workflows, self-service provisioning, and agile service creation.

Secondary storage

Studies found that ransomware attacks have increased by 90% in the past year. With cybersecurity issues on the rise, cloud can be used as a backup when disaster occurs.

Performance

The public cloud provides cutting-edge, high-performance at a manageable cost. In addition, organizations can take advantage of the geographic distribution of public cloud data centers to improve availability and latency.

Cost savings

A well-managed public cloud environment offers many opportunities to reduce setup, maintenance, and storage and compute costs. Cloud infrastructure resources scale up and down smoothly and cost-effectively to meet dynamic business needs.

However, public cloud usage in general—and cloud storage in particular—is not without its challenges, including availability, operational complexity, cost sprawl, compliance, and security. In this guidebook, we present real-life success stories of enterprises from a wide range of industries that use NetApp Cloud Volumes ONTAP for Azure to meet these challenges and to maximize the benefits from their cloud data storage deployments.

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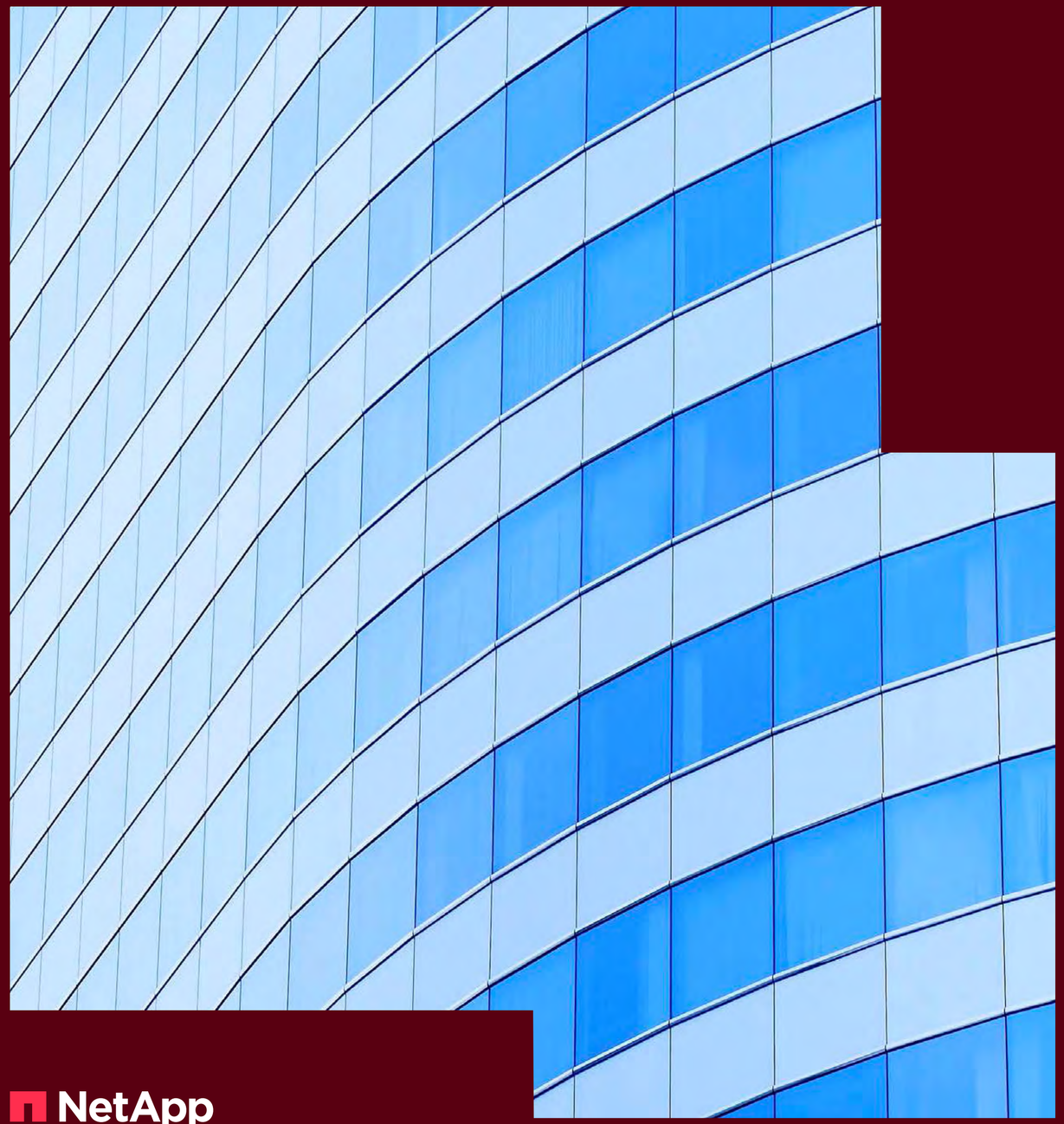

WHY USE AZURE FOR ENTERPRISE?

Through Azure, Microsoft offers a full set of infrastructure (IaaS), platform (PaaS), and application (SaaS) cloud services. Currently, 95% of Fortune 500 companies use Azure in their businesses, and its market share has been growing steadily. Many companies have years of technical investment in the Microsoft ecosystem, and use of Azure is the logical next step.

With heavy investment in security and compliance, Azure and its large network of partners offer enterprises like yours an environment that integrates well with existing on-premises and edge deployments.

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CLOUD STORAGE CHALLENGES

ALTHOUGH THE AZURE CLOUD OFFERS AN ARRAY OF BENEFITS, MOVING TO THE CLOUD STILL PRESENTS SEVERAL CHALLENGES FOR ENTERPRISE IT DEPARTMENTS TO CONSIDER.

1

Availability

To uphold high-availability SLAs in the cloud, enterprises must use redundant architectures with seamless failover and failback processes.

2

Data protection, disaster recovery

In the shared-responsibility model, cloud customers are responsible for protecting their data from deletion, corruption, and exfiltration, including the ability to recover from natural or human-made disasters.

3

Backups and archiving

Data backup and long-term retention are business-critical requirements. Enterprises must confirm that data to be archived in the cloud is aggregated from all relevant storage systems in a fully automated process.

4

File share acessibility

Often enterprises employ both Windows and Linux machines and need to serve out both NFS and SMB/CIFS file data.

5

Compliance and governance

Some key challenges are the blurred lines of compliance responsibility across the different service models (IaaS, PaaS, SaaS), the highly distributed nature of cloud environments, and the growth of shadow IT.

6

Security

Challenges to meet include identity and access management (IAM) controls that are granular enough to prevent unauthorized access, as well as encryption of data at rest and in flight and careful data encryption key management.

7

Storage footprint and costs

For maximum cost-effectiveness, cloud data must be stored as efficiently as possible, but storage efficiencies such as thin provisioning, compression, deduplication, point-in-time snapshots, and data cloning aren't built into cloud storage services.

8

Data tiering, inactive data

Active and inactive data must be automatically detected so that it can be seamlessly shifted between low-cost object storage and high-performing disk storage.

9

Container/Kubernetes persistent volumes

With modern applications relying more and more on ephemeral containers and on Kubernetes orchestration, organizations face the challenge of managing persistent data storage.

10

Multicloud and hybrid

The almost universal adoption of multicloud and hybrid strategies raises many data storage challenges, such as end-to-end visibility, unified management, interoperability, and consistent security and compliance policies.

CLOUD VOLUMES ONTAP FOR AZURE CUSTOMER SUCCESS STORIES

NetApp Cloud Volumes ONTAP is an enterprise-grade data management system that runs as an instance on Azure storage, complementing cloud-native services. Its operational and storage efficiencies dramatically reduce administration time, storage footprint, and costs. Cloud Volumes ONTAP is managed through NetApp BlueXP. The single-pane BlueXP UI provides end-to-end visibility into and control of cloud data assets in Azure and across hybrid and multicloud architectures, and every action is also fully automatable through API calls.

Cloud Volumes ONTAP for Azure is successfully in operation with thousands of customers worldwide. In this section, we look at some of these case studies and show how NetApp Cloud Volumes ONTAP helps enterprises overcome cloud storage challenges and maximize data storage on Azure.

CONE HEALTH

McKESSON

Online Fashion and Cosmetic Retailer

Managed Services Provider

U.S. Insurance Company

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U.S. DEPARTMENT OF JUSTICE

The Environment and Natural Resources Division of the U.S. Department of Justice issues massive amounts of subpoenas and maintains a large volume of data for numerous cases. This data is in constant use and requires easy and secure access. Migrating such a workload to Azure presented a challenge, one that NetApp Cloud Volumes ONTAP was able to meet.

Cloud Volumes ONTAP helped the Environment and Natural Resources Division shift a massive 300TB of backup data to the cloud, securely and on a tight, 2-week deadline, all while providing full access to the entire dataset for ongoing casework.

With Cloud Volumes ONTAP, the Environment and Natural Resources Division:

- ✓ Carried out the entire 300TB migration securely and on time through NetApp SnapMirror data replication technology.
- ✓ Gained an easy interface to manage all the data resources in use throughout the deployment.
- ✓ Avoided the data corruption incidents that had been an issue with previous vendors.
- ✓ Added scalability and flexibility for future growth.

→ **Read the full Environment and Natural Resources Division case study**

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HIROSHIMA PREFECTURAL GOVERNMENT MAINTAINS CRITICAL DATA AVAILABILITY

Hiroshima Prefecture

Hiroshima Prefecture, which includes the major city of Hiroshima, is one of the significant industrial centers of Japan and is home to close to 3 million people. The IT solution that supports the prefecture integrates a file server with about 300TB of data alongside another 100TB in virtual storage infrastructure. Because of the critical nature of this data, the system cannot tolerate any downtime, meaning that business continuity and high availability are a must.

To meet these crucial availability requirements, NetApp Cloud Volumes ONTAP helps the Hiroshima Prefectural Government combine their on-premises data center with Azure.

Cloud Volumes ONTAP has enabled the Hiroshima Prefecture to:

- Create six complete backup copies of their data every day through NetApp Snapshot™ technology.
- Maintain data protection and recovery capabilities that keep the system up and running.
- Cut 33% of their storage footprint and costs by using storage efficiencies.
- Reduce their overall power consumption by a considerable 23%.

→ **Read the full Hiroshima Prefectural Government case study**

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CONE HEALTH ADVANCES PATIENT CARE

Cone Health is a healthcare system in North Carolina that consists of five hospitals, six ambulatory care centers, three outpatient surgery centers, eight urgent care centers, two retirement communities, and over 120 physician practices. The process to maintain and to make available electronic medical records (EMRs) for millions of people throughout their lives is a huge undertaking that generates enormous data volumes. EMRs are the data that runs a healthcare system, and patient records must be available and accurate with no interruption.

Cone Health uses Epic software for this gigantic task and has invested heavily in on-premises data centers for application and data management. Necessary disaster recovery investments mean complete duplication of these huge data volumes—with significant costs. To continue a digital transformation that will improve quality and lower the costs of care, Cone Health moved Epic workloads to the Microsoft Azure cloud, powered by NetApp technology. With an on-premises infrastructure, a large EMR application refresh can take months to achieve. In combination with NetApp Cloud Volumes ONTAP, the Azure cloud is faster to scale and is more cost-effective.

CONE HEALTH®

With Cloud Volumes ONTAP for Azure, Cone Health has been able to:

- Reduce the cost of secondary backup and disaster recovery solutions by $1 million annually.
- Spin up new environments in minutes or hours instead of 6 months with the organization's previous solution.
- Maintain business continuity in an industry where downtime means patient care could be delayed.

Read the full Cone Health case study

MCKESSON: HEALTHCARE INNOVATION AND INVENTION

McKesson is the largest healthcare company in the United States, distributing one-third of all medications across North America. McKesson was feeling constrained by the managed private cloud solution that it was using. The company needed a platform for developing, testing, and deploying their fulfillment and logistics applications at scale and at speed. They found what they needed in the public cloud and NetApp.

The McKesson IT team adopted an intelligent data infrastructure strategy. The team uses NetApp AFF and NetApp E-Series flash storage in its data center, and their public cloud is powered by NetApp Cloud Volumes ONTAPfor Azure.

McKESSON

With NetApp solutions and Azure, today, McKesson benefits from:

- Improved cloud performance at a much lower cost.
- More responsiveness, so the IT team can effectively meet the needs of developers and business units.
- Disaster recovery as a service (DRaaS) by using **Azure Site Recovery** to replicate applications and VMs.
- Seamless integration across the hybrid deployment, with NetApp SnapMirror and Cloud Volumes ONTAP replicating on-premises data to Azure.

→ **Read the full McKesson case study here**

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FINANCIAL SERVICES COMPANY ENHANCED A VDI TO MEET INCREASED WFH DEMANDS

In the ongoing work disruptions around the world, companies are trying to act fast to set up new virtual desktop infrastructure (VDIs) or enhance existing ones to meet the increased usage and demand. Here is a case study of one company that turned to Cloud Volumes ONTAP to overcome their VDI ramp-up challenges.

This company is a prominent US financial advisory enterprise that serves over a hundred countries and markets with a global workforce in the tens of thousands. They had already been using Cloud Volumes ONTAP

for Azure to meet their data retention, backup, disaster recovery (DR) and availability use cases, while their self-hosted VDI solution was using NetApp on-prem arrays to handle the SMB/CIFS file sharing element. In the wake of the COVID-19 crisis, the company's internal IT team had to expand overnight the capacity of their self-hosted VDI environment in order to meet the needs of thousands of employees beginning to work from home. That's when they turned to Cloud Volumes ONTAP.

Using the flexible and cost-effective pay-as-you-go (PAYGO) model, it took the company's IT team just over 24 hours to do three major tasks: deploy three new Cloud Volumes ONTAP environments across three different Azure regions, replicate their on-premises VDI data to the cloud instances, and configure the instances to match the on-premises environment. This quick adoptability ensured that the company's global standards were maintained, even during the increased usage.

The immediate benefits the company gained from deploying their VDI with Cloud Volumes ONTAP include:

- Being able to burst into Azure quickly and agilely to meet the WFH VDI demands when the capacity of the self-hosted environment reaches its limit.
- Seamless transfer of VDI data to and from the cloud with no need for re-formatting, using SnapMirror data replication.
- Enterprise-grade protection of VDI data in the cloud: Encryption of data at rest as well as automated backups using point-in- time incremental NetApp Snapshot technology.

Read the full blog post on this case study here

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GALATZ RADIO OPERATIONALIZES A PRICELESS ARCHIVE

Galatz Radio comprises two popular Israeli radio stations that are regularly listened to by more than half of Israel's population. Galatz Radio had stored its archive of 90,000 hours of programming on analog tapes, which were becoming difficult and risky to access.

After deciding to digitize its priceless archive, the company first moved the archive to an on-premises NetApp storage environment and then used NetApp Cloud Volumes ONTAP for Azure to migrate the digitized assets to the cloud. This unique recorded history is now readily available to the public.

Some other advantages that Galatz Radio has obtained from its Cloud Volumes ONTAP deployment include:

- The company can have the same data storage management interface for its on-premises and cloud-based assets through NetApp BlueXP. In a single pane, this intuitive interface provides full visibility and control across the company's hybrid deployment.
- Moving to the cloud, combined with Cloud Volumes ONTAP automated compression and deduplication storage efficiencies, has reduced the company's costs by 70%.
- By using SnapMirror, the company can maintain a backup and recovery replica site with excellent failure recovery metrics.

Read the full Galatz Radio case study here

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ONLINE FASHION AND COSMETIC RETAILER MOVES MISSION-CRITICAL WORKLOADS TO THE CLOUD

Founded at the turn of the millennium, this British online fashion and cosmetics retailer sells more than 850 brands as well as its own line of clothing and fashion accessories. It employs more than 3,500 people worldwide and ships to over 200 countries from fulfillment centers in the United Kingdom, the United States, and Europe.

As part of its transition to a cloud-only strategy, the company sought a storage platform for its mission-critical Oracle Retail stack. After a brief, successful proof of concept, the company decided to deploy 14 NetApp Cloud Volumes ONTAP for Azure systems. The company used them across regions for production database workloads and also in its preproduction environment.

Instead of deploying other solutions, the company chose Cloud Volumes ONTAP for the following benefits:

- Ease of implementation: The entire solution was deployed in a single day.
- Superior manageability by using NetApp BlueXP as a single-pane data storage management interface.
- An in-cloud disaster recovery solution with the proven ability to recover quickly from both local and full-region failure scenarios, with no data loss.

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MANAGED SERVICE PROVIDER RUNS SHARED FILE SYSTEMS IN THE CLOUD

This SAP full-service provider is the leader in the German-speaking midmarket segment. It has more than 2,000 customers—mostly small to medium-sized businesses in manufacturing and consumer goods and services. In addition to SAP consulting and support, the company offers a range of fully managed services, including hosting services on its own infrastructure, cloud-hosted services, and end-to-end SAP application management.

The company was already using NetApp solutions for its on-premises storage systems, so NetApp Cloud Volumes ONTAP for Azure was a natural choice to move services over to the cloud. The first clear benefit was the seamless transition from NetApp on-premises data storage management to Cloud Volumes ONTAP, with no need to retrain staff. All of its on-premises processes and automation scripts worked “as is” on Cloud Volumes ONTAP.

Other benefits that the service provider has realized include:

- High availability: With Cloud Volumes ONTAP high-availability (HA) pairs, the company doesn’t need to close down its own services during maintenance, upgrades, or updates. Site failure downtime can be limited to under 60 seconds, with no data loss.
- A software-only storage appliance that runs ONTAP data management.
- Strong automation capabilities, either by using REST APIs directly or by using the NetApp BlueXP UI. For example, Cloud Volumes ONTAP instances are provisioned automatically when the company onboards a new customer.
- Good visibility into the environment through BlueXP.
- Data protection through NetApp Snapshot technology.
- Cost savings from deduplication and compression as well as from data tiering, which automatically offloads code data to Azure Blob storage.

U.S. INSURANCE COMPANY WITH PETABYTES OF DATA IN AZURE- ALL MANAGED BY ONE PERSON

This veteran insurance and finance company is among the top 10 providers of pensions, variable annuities, and life insurance in the United States. Its 8,800 employees serve 13 million customers.

Already a NetApp on-premises storage customer, the company now uses NetApp Cloud Volumes ONTAP for both Azure and AWS to move data into the cloud. It uses NetApp BlueXP to create volumes, to perform CIFS shares and NFS mounts, and to create aggregates.

A team of just three manages the company's entire NetApp NAS environment of petabytes of storage, with hundreds of thousands of shares across thousands of volumes.

Within that team, one person handles Cloud Volumes ONTAP.

With more NetApp solutions in place, now the company gets all the same benefits in the cloud that it gets from its on-premises environment, including:

- File service solutions—both SMB/CIFS and NFS—that work the same way in the cloud as on premises.
- High-availability support, using HA pairs.
- Data protection, backup, and disaster recovery through point-in-time, read-only NetApp Snapshot copies.
- The ability to create writable cloned volumes from Snapshot copies by using NetApp FlexClone.
- Adherence to strict compliance regulations through volume-level encryption of data at rest and in flight.

GET MORE FROM AZURE WITH CLOUD VOLUMES ONTAP

With all the compelling benefits of data storage in the cloud with Azure, there are still considerable challenges to overcome to keep your data available, protected, secure, and compliant. Cloud data storage must also be carefully managed with as much automation as possible to prevent costly sprawl and unnecessarily high storage costs for your inactive data.

NetApp Cloud Volumes ONTAP extends NetApp's industry-leading enterprise data management on-premises solutions to Azure cloud users. Cloud Volumes ONTAP improves the performance, availability, and security of cloud-native storage, while reducing your costs.

See how NetApp Cloud Volumes ONTAP for Azure can take your data management to the next level.

→ Start a free 30-day trial now

About NetApp

NetApp is the intelligent data infrastructure company, combining unified data storage, integrated data services, and CloudOps solutions to turn a world of disruption into opportunity for every customer. NetApp creates silo-free infrastructure, harnessing observability and AI to enable the industry's best data management. As the only enterprise-grade storage service natively embedded in the world's biggest clouds, our data storage delivers seamless flexibility. In addition, our data services create a data advantage through superior cyber resilience, governance, and application agility. Our CloudOps solutions provide continuous optimization of performance and efficiency through observability and AI. No matter the data type, workload, or environment, with NetApp you can transform your data infrastructure to realize your business possibilities. www.netapp.com

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