

Hitachi Vantara Virtual Storage Platform One:

Consistent, Streamlined Multi-cloud Data Storage

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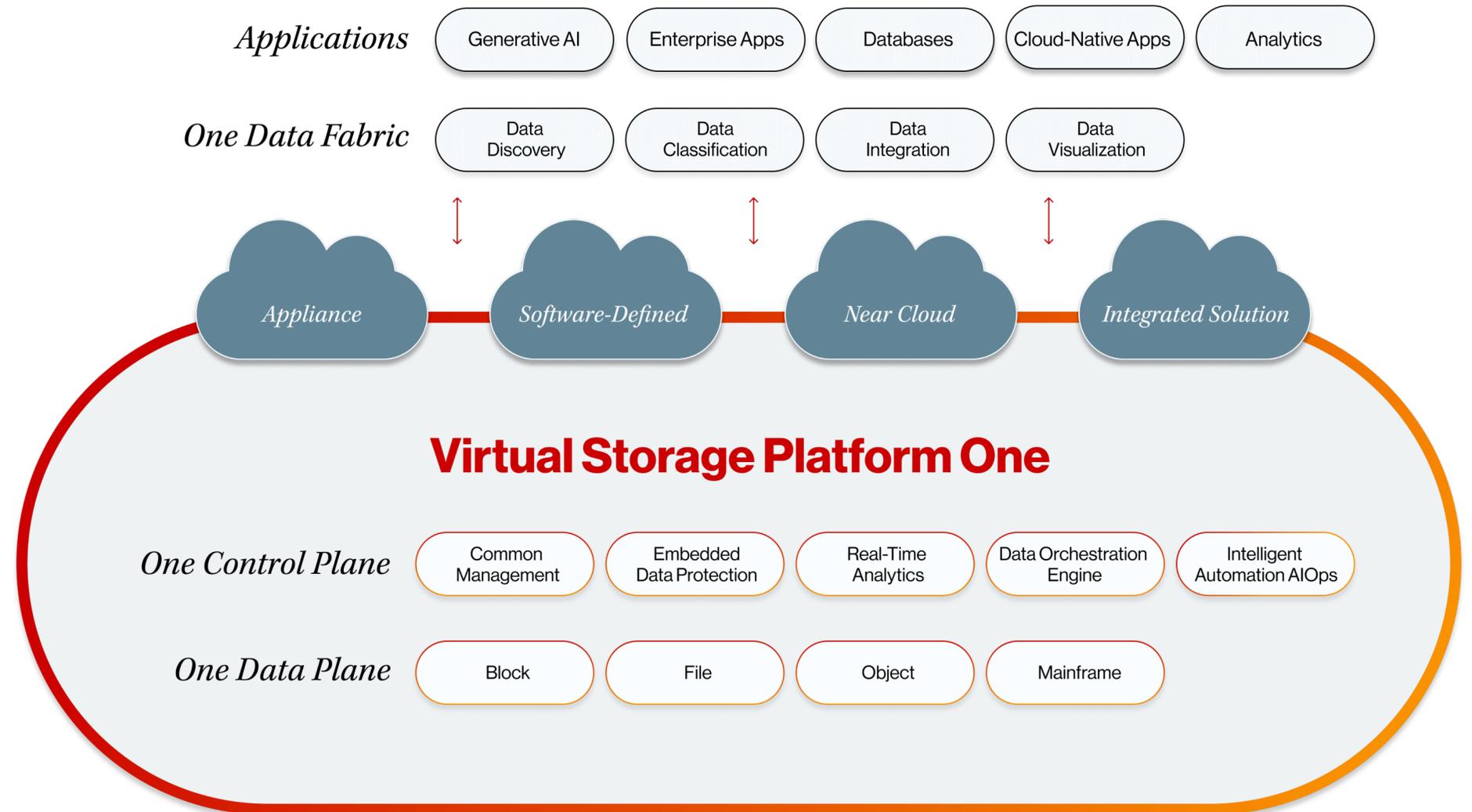


Introduction

Success in business is fueled by the effective use of data. Too often, however, an organization’s data is dispersed across multiple clouds, data centers, and edge locations, with each site acting as a disparate silo. The race to harness the agility and flexibility benefits of multi-cloud operations has resulted in increased cost, complexity, and risk when it comes to storing, managing, protecting, and using data.

At scale, the impacts of dispersed data and siloed storage hinder operations and the execution of digital initiatives to the point that the benefits of the cloud often evaporate entirely. For example, one only needs to look at the latest groundbreaking innovation of generative AI, a technology with nearly unlimited potential hindered by concerns related to data privacy, security, and quality. Business success is dependent on data, and the potential of a business’s data depends on an organization’s ability to eliminate the restrictions of storage solutions. Organizations need to take a platform approach to data and storage that delivers agility, flexibility, and accelerated access to data while continuing to control for protection and security.

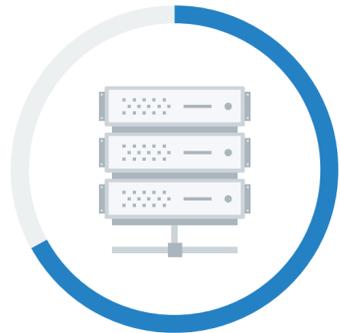
To this end, Hitachi Vantara’s recently introduced Virtual Storage Platform One, a storage platform designed to transform digital operations. Virtual Storage Platform One can be deployed across hybrid and multi-cloud environments to provide consistency and simplicity as organizations manage the explosive growth in the capacity and the value of data. The end goal is to allow organizations the freedom to store, protect, and use their data wherever the business requires, without the added cost, complexity, and risk created by disparate storage silos.



The Pressure to Accelerate Operations Fuels Increased Data Dispersal

The ever-present reality for modern business and operations is the constant pressure to accelerate digital operations. Nearly every business has had to accelerate operations to keep pace with the demands of the business.

“ **The key takeaway:**
Pressure on IT leads to
data everywhere.”



67%

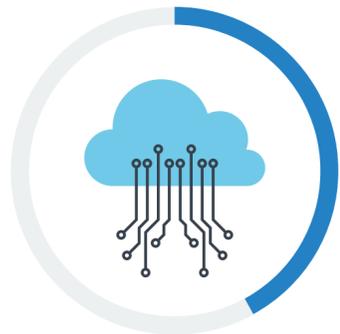
of organizations agree they are under pressure **to accelerate IT infrastructure provisioning/deployment to support developers/line-of-business teams.**¹



91%

of organizations **have had to accelerate operations over the last three years.**²

Responding to that pressure to accelerate operations:



42%

have increased investment in public cloud, leading to data being distributed across multiple locations.



36%

have increased usage of cloud-native architectures, such as containers. In these environments, the portability benefits of containerized apps further fuel the adoption of multiple cloud providers.³

¹ Source: Enterprise Strategy Group Survey Results, *2021 Data Infrastructure Trends*, September 2021.

² Source: Enterprise Strategy Group Complete Survey Results, *Distributed Cloud Series: The State of Infrastructure Modernization Across the Distributed Cloud*, August 2023.

³ Ibid.

Dispersed Data Results in Disparate Experiences Across Multi-cloud Environments

In an effort to accelerate business agility, the adoption of multiple cloud providers has increased in recent years, resulting in data being distributed across a wider variety of locations.⁴

Modern data is spread across multiple distributed and disparate silos, creating increased cost, complexity, and risk to move, store, protect, and secure that data.

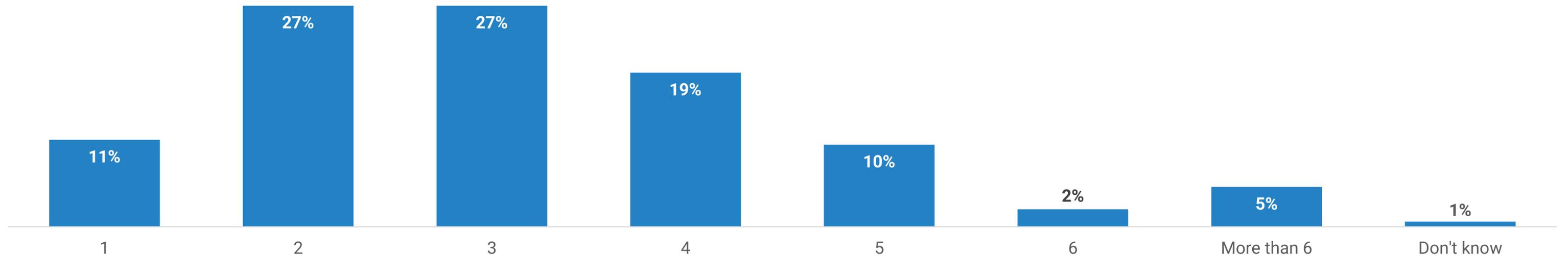


87% of organizations agree that their application environment **will become distributed across more locations over the next two years.**⁵



60% of organizations agree that they **regularly encounter issues with visibility across all their data.**⁶

Approximately how many unique public cloud infrastructure service providers (IaaS and/or PaaS) does your organization currently use?



⁴ Ibid.

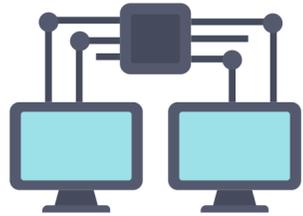
⁵ Source: Enterprise Strategy Group Research Report, *Multi-cloud Application Deployment and Decision Making*, June 2023.

⁶ Source: Enterprise Strategy Group Survey Results, *2021 Data Infrastructure Trends*, September 2021.

The Siloed Approach to Data Storage Tops List of Storage Challenges

Modern storage infrastructure must address the challenges of storing, protecting, and moving data. For decades, storage infrastructure was optimized to simplify the storage and protection of information. For contemporary environments, however, that is not enough: Modern storage environments must also simplify the movement and access of data anywhere it is required. The modern reality of data being dispersed across multiple, disparate storage architectures, each featuring different experiences and different considerations, has created a new list of storage challenges that surpass traditional challenges of cost, performance, and protection.⁷

Top block storage challenges.



35%
Data migration



30%
Ensuring data security/adhering to compliance requirements



28%
Backups

Top file/object storage challenges.



Management, optimization, and automation of data placement on storage tier or media



Data migration



Ensuring data security/adhering to compliance requirements



Automation and management of storage and data services



35%
annual growth is expected
for on-premises capacity,
on average.⁹



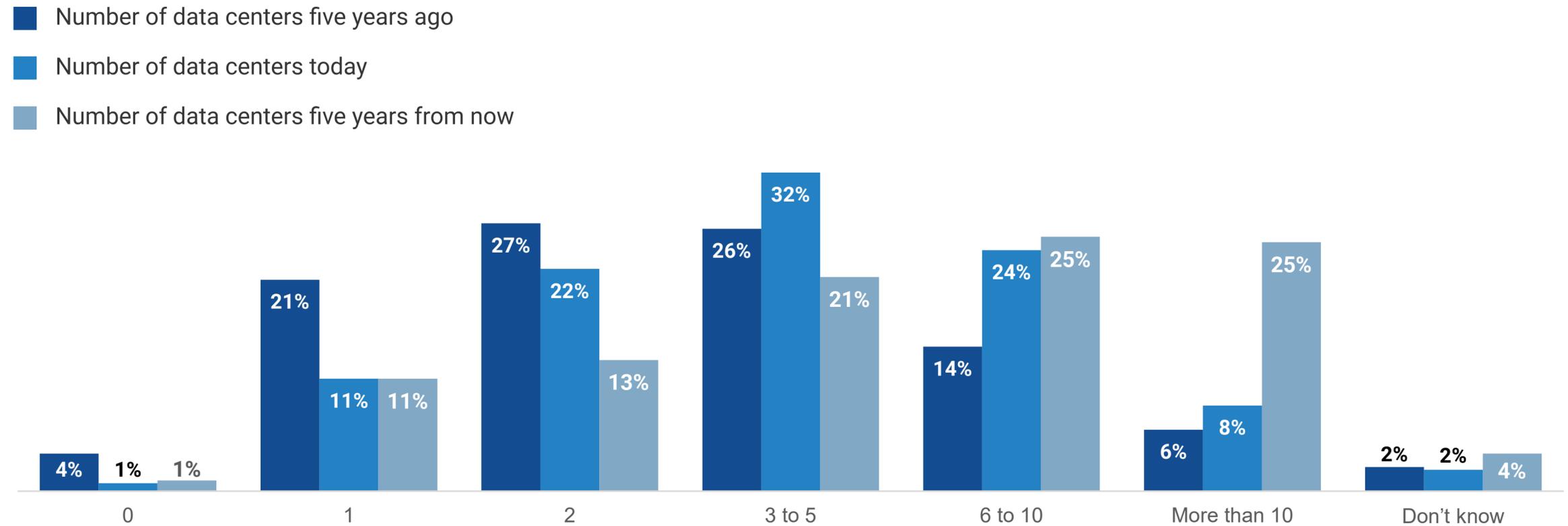
64%
of organizations view data
center design as a strategic
process that could lead to a
competitive advantage.¹⁰

The Vital Role of On-premises Storage Infrastructure in Multi-cloud Environments

While data proliferates across multi-cloud locations, the on-premises data center is essential to multi-cloud operations. The percentage of organizations with six or more data centers is expected to increase from 32% to 50% in the next five years.⁸ The motivations to increase investment in data center infrastructure vary by organization but often include heightened requirements for data locality, data security, performance, or availability. And data continues to scale on premises.

When addressing the complexities of distributed data storage environments, the solution must be able to span on-premises data centers as well as public cloud services if it is to deliver the necessary benefits.

Number of data centers in the past, present, and future.



⁸ Source: Enterprise Strategy Group Complete Survey Results, *Distributed Cloud Series: The State of Infrastructure Modernization Across the Distributed Cloud*, August 2023.

⁹ Source: Enterprise Strategy Group Survey Results, *2021 Data Infrastructure Trends*, September 2021.

¹⁰ Ibid.

The 3 Essentials of a Modern and Effective Multi-cloud Data Storage Architecture

Businesses must take a data platform approach to hybrid, multi-cloud storage rather than a siloed approach by addressing three essential components of a modern, effective multi-cloud data storage architecture:



1. SIMPLIFIED DATA AGILITY

Enable application data to flow easily between applications, with one data plane that can simplify access to the right data, anywhere.



2. EASE OF DATA AND STORAGE MANAGEMENT

Allow applications to consume data infrastructure with one data fabric.



3. FASTER TIME TO INSIGHTS

Simplify control of data infrastructure with a single data solution and control plane.

Virtual Storage Platform (VSP) One is a single data plane across structured and unstructured data, including block, file, and object, so organizations can run all of their applications anywhere—on premises or in the public cloud. As a single data storage platform, it is designed to eliminate silos and the nuances of disparate storage systems, enabling organizations to easily and securely access data needed for business insights.

Essential #1: Simplified Data Agility

A core reality of modern data operations is that data movement is frequent, complex, and critical to operations. Addressing the complexity of data movement with a consistent storage platform for block, file, and object data, such as what Hitachi Vantara is announcing with VSP One, is essential to operations as digital demands scale.



65% of organizations agree that **they face challenges with application and data portability** across locations.¹¹



52% of organizations move data between their data centers and public cloud services **“all the time” or “regularly.”**¹²

For what purpose(s) does your organization move data between its data center(s) and public cloud services?



To **consolidate** data collected at edge locations



To **support** application development/DevOps activities



For **access/collaboration** for line-of-business users across locations



As part of a **data pipeline** to support larger analytics/intelligence or machine learning initiatives



To **support distributed application environments** where the components span locations on- and off-premises

Essential #2: Ease of Data and Storage Management

Addressing the complexities of data access and storage in hybrid and multi-cloud environments requires consistency. Some of the top challenges related to managing applications across multi-cloud environments are shown on the right.¹³ With a consistent data fabric across locations, Hitachi VSP One simplifies the management of data across locations by helping ensure a consistent data storage and protection experience.

In terms of application management, what are the most difficult challenges your organization faces as a result of using multiple cloud service providers (CSPs)?



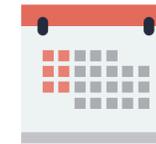
31%

Meeting security expectations



25%

Meeting application performance expectations



23%

Meeting availability and redundancy expectations



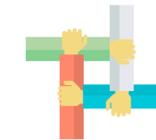
23%

Ensuring a consistent user experience



23%

Varying support services and SLAs



23%

Ensuring proper coordination/cooperation between multiple cloud teams along with traditional IT functional teams

Essential #3: Faster Time to Insights

Every business is a digital business that relies on data to play either a supporting or primary role. Hitachi VSP One offers the ability to provide consistency while minimizing risk to data storage and operations in order to accelerate the time to insights and better enable data-centric business benefits.



49%

of organizations generate revenue directly from digital products or services.



60%

of organizations agree that they regularly encounter issues with visibility across all data.¹⁵

“ The cost and complexity of ensuring data visibility often forces decisions in app placement, as multiple data-centric factors drive deployment decisions, including:¹⁴”

Have any of the following factors created an exception that led your company to deploy a net-new application on-premises?



Conclusion

The right data storage architecture is paramount for every business. When designing, architecting, and selecting a data storage solution to address the needs of today's contemporary storage environment, it is absolutely essential to understand that the complexity of modern data storage is rooted in the distribution of data. If a storage solution does not simplify access, simplify management, and accelerate the time to insights across multiple locations for all types of data, it will limit the scale and success of digital operations and, ultimately, limit the success of an organization's business.

Hitachi Vantara is addressing the three essentials of a modern and effective multi-cloud data storage architecture with Virtual Storage Platform One, a consistent data storage platform designed to simplify data access, storage, and protection anywhere, for any type of data (block, file, object, or mainframe).

In addition to simplifying the connectivity of data from the edge of an organization's core data centers to public clouds with agility and automation, as well as removing application complexity with its single, common data plane, Virtual Storage Platform One is designed to deliver:

- **100% data availability guarantee.**
- **Data reduction guarantee of 4:1.**
- **Sustainable design, as Hitachi Vantara has reduced the annual carbon footprint of Virtual Storage Platform by up to 86% since 2014. Virtual Storage Platform is also manufactured in Japan, which produces 38% less CO₂ than storage manufactured elsewhere. According to Hitachi Vantara, it is the only storage vendor to have its products certified by Carbon Footprint for Products.¹⁶**

¹⁶ <https://www.hitachivantara.com/en-us/solutions/sustainability/data-center-ecosystem.html>

About Virtual Storage Platform One

Hitachi Vantara's Virtual Storage Platform One is designed to be a next-generation, all-in-one data solution. Built for data flexibility and resiliency, it brings the simplicity and scale organizations need to unleash the possibilities of their data. With a single data plane across block, file, and object workloads that's addressable from one AI-enabled software stack, data clarity is at users' fingertips. No hassle, no silos, and no limits. This innovative self-service, autonomous storage platform brings together the best of enterprise storage, with the agility and scalability of the cloud. Featuring a single data plane and a cloud operating model, Virtual Storage Platform One provides flexibility, agility, and speed—no matter where data ultimately resides.

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About Hitachi Vantara

Hitachi Vantara, a wholly owned subsidiary of Hitachi Ltd., delivers the intelligent data platforms, infrastructure systems, and digital expertise that supports more than 80% of the Fortune 100. To learn how Hitachi Vantara turns businesses from data-rich to data-driven through agile digital processes, products, and experiences, visit www.hitachivantara.com.



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