Wasabi Hot Cloud Storage For Internet2

Executive Overview

The Internet2 community relies on big data and analytics to conduct fundamental research. By analyzing vast datasets researchers and scientists can improve our understanding of the universe, accelerate cures for diseases, and advance weather forecasting and climate modelling. Unfortunately, many organizations simply can't afford to store and share massive data volumes using traditional on-site storage platforms or costly first-generation cloud storage services.

Wasabi helps research organizations overcome big data storage cost and scalability barriers with the industry's most affordable and highest-performing cloud storage solution. Specifically conceived to make storage a commoditized utility like electricity, Wasabi hot cloud storage is extremely cost-effective, fast and reliable cloud object storage—for any purpose. With Wasabi, researchers no longer have to make difficult decisions about which data to collect and share, where to store it and how long to retain it.

This paper provides a brief overview of Wasabi hot cloud storage and explains how it can help the Internet2 community eliminate data storage cost and complexity obstacles, laying the foundation for big data and advanced analytics.

Traditional Storage Solutions Are Too Costly and Complex For Big Data

Big data is the lifeblood of the Internet2 community. To enable scientific discovery and foster collaboration distributed researchers must efficiently collect, index, archive, share, and analyze massive volumes of raw data. But conventional storage solutions are far too costly and complex for the era of big data.

Today, most organizations store data locally using HDD/SSD[1] storage arrays from vendors like Dell EMC, HPE and NetApp, or in the cloud using services like Amazon Simple Storage Service (S3), Google Cloud Platform or Microsoft Azure. Each approach has distinct advantages and disadvantages. Neither meets the increased price-performance requirements of big data and analytics.

On-Premises Storage Solutions

On-premises storage solutions offer superior performance (low latency, fast read/writes) for data intensive, delay-sensitive applications like high-performance computing. But on-site storage solutions are notoriously costly and complex to procure, maintain and extend.

Disadvantages include:

- **High capital equipment expenses –** significant upfront equipment costs.
- **High operational expenses –** recurring power, cooling and rack space expenses; expensive monthly hardware and software maintenance and support fees; and excessive system administration cost and complexity all lead to high ongoing operations expenses.
- **Obsolescence concerns –** storage vendors regularly retire products and discontinue support plans, often subjecting customers to costly and disruptive upgrades.
- **High risk –** ensuring continuous availability (replicating data to a secondary data center) is an expensive proposition beyond the reach of many organizations.
- **Complex operations –**legacy storage solutions are difficult to configure and administer, and require special training and expertise.

First-Generation Cloud Storage Services

First-generation cloud storage services such as S3, Google Cloud and Azure improve economics and accelerate time-to-value by eliminating equipment expense and complexity, and enabling pay-as-you-grow scalability. Cloud-based services also offer inherent resiliency, enabling more cost-effective disaster recovery and high availability. They also protect against obsolescence—new features and capabilities are introduced in the cloud, with minimal imposition to the customer.

While first-gen cloud storage services offer cost and operational advantages over traditional on-premises storage solutions, they are still too expensive, complicated and slow-performing for many applications.

Limitations include:

- **Costly and confusing service tiers –** first-gen cloud vendors sell several different types (tiers) of storage services. Each tier is intended for a distinct purpose—primary storage, backup storage or long-term retention. Each has unique performance and resiliency characteristics, SLAs and pricing schedules. Complicated fee structures with multiple pricing variables make it difficult to make educated choices, forecast costs and manage budgets.
- **Poor performance –** first-generation cloud storage services support significantly slower read/write speeds than traditional on-premises storage platforms (it takes much longer to move data in and

1 A conventional mechanical hard-disk drive (HDD) or a newer solid-state drive (SSD)

out of the cloud) and are not well suited for data intensive, delay-sensitive applications like advanced analytics.

- **Vendor lock-in –** most cloud vendors impose costly fees to retrieve data from storage, which makes it expensive to switch services.

Wasabi Hot Cloud Storage Eliminates Equipment Expense and Complexity

Wasabi hot cloud storage can help you reduce costs and accelerate time-to-value by eliminating equipment expense and complexity, and enabling pay-as-you-grow scalability. Advantages of using Wasabi hot cloud storage over traditional on-site storage solutions include:

- **Better economics –** Wasabi eliminates upfront equipment outlays, recurring hardware maintenance fees and ongoing equipment operations expenses.
- **Instant and infinite scalability –** with Wasabi you can expand capacity on-demand to precisely align ongoing expenses with business demands.
- **Simplified operations –** with no storage infrastructure to manage, you can free up IT staff to focus on other tasks.
- **Future-proof investment –** with Wasabi new features and capabilities are introduced in the cloud, without disruption.
- **Improved data durability –** Wasabi provides eleven 9s object durability—better than most on-premises storage platforms.

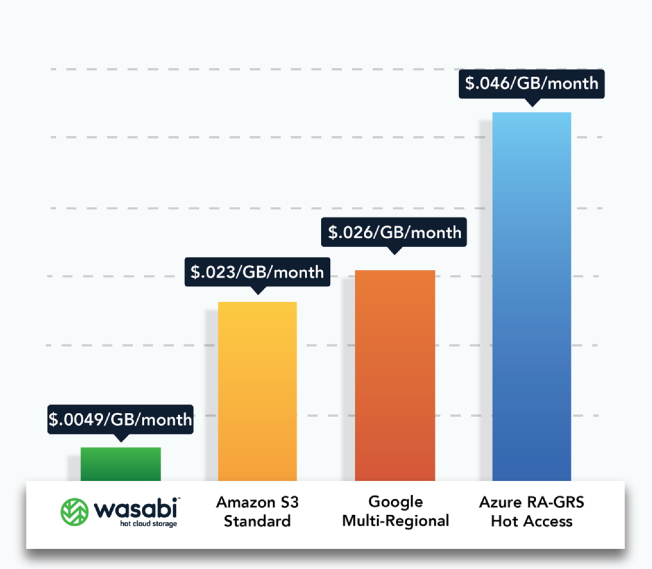
Wasabi Outperforms First-Generation Storage Clouds

Wasabi is less expensive, faster and simpler than first-generation cloud storage services. Wasabi hot cloud storage is easy to understand, easy to order and incredibly cost-effective to scale. Unlike first-generation storage clouds, with Wasabi there are no confusing storage tiers to decipher and no complicated fee structures to decode. One product, with straightforward and ultra-low pricing, supports a wide range of applications.

Advantages of Wasabi hot cloud storage include:

- **Commodity pricing –** Wasabi hot cloud storage costs a flat $.0049/GB/month. Compare that to $.023/GB/month for S3 Standard, $.026/GB/month for Google Multi-Regional and $.046/GB/month for Azure RA-GRS Hot. Unlike Amazon, Google and Azure we don't impose extra fees to retrieve data from storage (egress fees). And we don't charge extra fees for PUT, GET, DELETE or other API calls.

  Read our New Economics of Cloud Storage tech brief for additional information.



- **Superior performance –** Wasabi's pioneering highly parallelized system architecture delivers an average 6x read/write performance advantage over Amazon

S3, with significantly faster time-to-first-byte speeds. Wasabi is markedly faster than S3 even for Amazon Elastic Compute Cloud (EC2) customers.

Download our Performance Benchmark report for additional information.

- **Robust data durability and protection –** Wasabi hot cloud storage is designed for extreme data durability, integrity and security. An optional data immutability capability prevents accidental deletions and administrative mishaps; protects against malware, bugs and viruses; and improves regulatory compliance.

Read our Strong Security and Data Immutability tech briefs for additional information.

The table below compares Wasabi with first-generation cloud storage services and on-site storage platforms.

	Wasabi Hot Cloud Storage	First-Gen Cloud Storage	On-Site Storage Platforms
Financial Attributes			
No capital equipment outlays	✓	✓	
Pay-as-you-grow, on-demand scalability	✓	✓	
No recurring power, cooling, and rack space expenses	✓	✓	
No equipment maintenance, admin and support burden	✓	✓	
Easy-to-understand, universal storage solution (no tiers)	✓		
Commodity pricing	✓		
No add-on fees for API calls or data retrieval	✓		✓
Functional Attributes			
Infinite scalability	✓	✓	
Strong security and control	✓	✓	✓
Rapid read/write speeds	✓		✓
Inherent resiliency	✓	✓	
Eleven 9s data durability	✓	✓	
Configurable data immutability	✓	✓ 2	✓ 2

Comparison of Wasabi, First-Generation Storage Clouds and On-Site Storage Platforms

2 Support varies by vendor. For example, Amazon only offers data immutability for its Glacier service.

Wasabi Works With a Wide Range of Data Management Applications

Wasabi hot cloud storage is bit-compatible with Amazon's popular S3 API. Wasabi customers enjoy full access to the world's largest cloud storage solution ecosystem and can choose from a wide variety of S3-compatible third-party products including:

- File management and file system extension solutions
- Big data and analytics integrations
- Data backup, replication and recovery products
- Policy-based archiving, tiering and hybrid storage solutions

In addition, the Wasabi Hot Cloud Storage Client for Mac & Windows makes it easy to move files in and out of the cloud.

Summary

Traditional on-premises and cloud-based storage solutions are too costly and complex for the era of big data. Wasabi hot cloud storage delivers groundbreaking pricing, performance and simplicity, providing an affordable and scalable alternative to conventional storage solutions.

Wasabi hot cloud storage is ideal for the Internet2 community. With Wasabi, research, academia, industry and government organizations can maintain and share massive datasets for a fraction of the price of alternative solutions. Wasabi can help the Internet2 community improve collaboration and accelerate the pace of discovery.

Next Steps

- **CONTACT WASABI TODAY.** Learn more about how Wasabi can help you eliminate the cost and complexity of traditional on-site storage solutions.
- **TRY WASABI FOR FREE.** Get up to 1 TB for 30 days.

About Wasabi

Wasabi is the hot cloud storage company delivering low-cost, fast, and reliable cloud storage. Wasabi is 80% cheaper and 6x faster than Amazon S3, with 100% data immutability protection and no data egress fees.

Created by Carbonite co-founders and cloud storage pioneers David Friend and Jeff Flowers, Wasabi is on a mission to commoditize the storage industry. Wasabi is a privately held company based in Boston, MA.

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