HPE Alletra Storage

Business white paper

Modernize data protection across hybrid cloud

Gain control and safeguard your data from disruptions

HPE

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Executive summary

Traditional data protection methods are ill-equipped to meet the demands of today's distributed applications and data. With exponential data growth and advanced cyber threats such as ransomware, regulatory pressures, risks from natural disasters, human error, and hardware failures, organizations face mounting challenges. Addressing these issues is essential to protect mission-critical systems, ensure seamless operations across diverse environments, and prevent costly downtime and data loss.

This white paper is intended to help organizations contend with the challenges associated with protecting their data from disruptions, loss, and the constant scourge of cyber related threats, across their expanding hybrid environments. It examines the key challenges posed by cross-cloud data protection and explores solutions, highlighting the importance of modern approaches that maintain business continuity without disruption.

Modern workloads facing modern threats

In today's digital era, the volume and significance of data for modern enterprises are growing exponentially, making the need for robust data protection more urgent than ever.

Traditional backup and recovery methods often struggle to keep up with increasing data volumes. To address this, organizations frequently rely on a mix of storage and software solutions, resulting in data silos. This approach not only consumes significant bandwidth and budget but also introduces new complexities when managing and protecting data across hybrid cloud environments.

Hybrid cloud is favored for combining the flexibility of the public cloud with the security of on-prem infrastructure. But it is a combination that brings with it a pressing need for modern data protection strategies to ensure that sensitive information remains secure, accessible, and compliant with evolving regulations.

Added to the list of data protection challenges is the continuous escalation of cybersecurity threats. This year, threat actors have increasingly adopted artificial intelligence to launch more sophisticated attacks, from deepfakes to one-time-password bots, all designed to compromise enterprise data. As more data is moved to the edge, the cost implication when this environment is compromised can be considerable. For example, the financial fallout for enterprises that experience a breach targeting Internet of Things (IoT) devices. Recent reports suggest that these organizations were more likely to report cumulative breach costs between $5 million and $10 million, compared to those that experienced cyberattacks on non-IoT devices.[1]

Experiencing a cyber breach doesn't only affect short-term operations, it can be highly detrimental to brand reputation

It should come as little surprise, therefore, that two-thirds (66%) of tech leaders rank cyber threats as their top risk for mitigation in 2024.[2] Or that cloud security is forecast to grow 24% in 2024,[3] making it the highest growth of all segments in the global security and risk management market. After all, experiencing a cyber breach doesn't only affect short-term operations, it can be highly detrimental to organizational reputation, long after the breach has been addressed, and even when the data is recovered.

To rise to the challenge of expanding threats to your data, increasing volumes of it, and the need to manage your hybrid cloud environments more seamlessly, you need a better, more modern approach to data protection.

[1] "The Top Trends In IoT Security In 2024," Forrester, March 2024

[2] "Only 2% of businesses have implemented firm-wide cyber resilience, even as cybersecurity concerns are top-of-mind and the average data breach exceeds US$3M: PwC 2025 Global Digital Trust Insights," PwC, September 2024

[3] "The Expanding Enterprise Investment in Cloud Security," Gartner, June 2024

Addressing common challenges in data protection

Lengthy disruptions: Under the current systems of working, recovering from disruptions takes too long. Organizations need a faster way to get backup and running when disruptions occur, without negatively impacting business continuity.

Costly downtime: Many organizations cannot afford downtime for critical workloads; however, they find that data availability remains unreliable with current tools.

Compliance concerns: Compliance and security remain a significant headache for all businesses, especially when sensitive data is spread across a multitude of environments.

Stalled innovation: Business continuity disruptions, exorbitant costs, and trying to keep pace with threats of data breaches all impact on an enterprise's ability to innovate. These stumbling blocks reduce business agility, making it more difficult to move quickly to take advantage of new opportunities.

Clearly, the current approach to data protection is no longer working. A new path is needed to meet business needs in the data-driven era.

Smooth sailing with streamlined operations and strengthened security

To reduce operational disruptions and simplify complexity, organizations need solutions designed to keep workloads running smoothly and data secured, no matter where it resides.

HPE's answer to modern, hybrid-centric data protection is twofold: to help eliminate legacy challenges and unify management from the edge to cloud. This approach provides faster, more reliable performance for critical applications while helping minimize data loss and downtime and keeping organizations ahead of ever-changing security and compliance requirements.

When disruptions occur, continuous data protection (CDP) from Hewlett Packard Enterprise enables organizations to recover in minutes with industry-leading recovery point objectives (RPOs) and recovery time objectives (RTOs).

Additionally, HPE solutions are built to help organizations stay in compliance and get ahead of ever-evolving data and regulatory requirements, including detailed reporting, audit logs, and global multisite dashboards. Integrated all-in-one solutions enable rapid air-gapped recovery using best-in-class storage, compute, networking, and software.

Three considerations that keep workloads running smoothly

Enterprises looking to upgrade their hybrid cloud experience with data protection in mind must consider three factors.

— **Maintain always-on business** by streamlining the protection, recovery, and mobility of both on-premises and cloud applications
— **Minimize data loss and downtime** through CDP with recovery in minutes with industry-leading RPO and RTO
— **Provide ironclad defense** for critical data with a decentralized Zero Trust architecture

Modernize your data protection with HPE Zerto Software

Enabling enterprises to run a continuously-on business, HPE Zerto simplifies the protection, recovery, and mobility of data for continuous availability across private, public, and hybrid deployments.

Reducing the risk and complexity of modernization and cloud adoption, it frees organizations to concentrate on their business innovation rather than fending off security threats or worrying about falling foul of compliance demands.

Mitigating evolving threats

— Advanced threat detection and response solutions that can identify and neutralize ransomware and other malware in real time
— On-demand sandboxes to enable easy patch testing, forensic analysis, or cybersecurity drills on near-exact copies of production
— Secure, on-premises, customer-controlled solution that combines an offline, isolated recovery environment (IRE) with an immutable data vault (IDV) that can serve as the last line of defense during even the worst ransomware attacks

Reduced disruption and downtime

— Trust CDP to help you recover in minutes, with industry-leading RPOs and RTOs
— Automated failover and failback processes to reduce downtime and maintain business continuity no matter whether recovering individual files or entire virtualized applications

Create cost-effective secure architectures

— Solutions offering automated and nondisruptive testing for resilient and secure architecture without excessive costs
— Stay in compliance and get ahead of ever-evolving data and regulatory requirements, including detailed reporting, audit logs, and global multisite dashboards
— Integrated all-in-one solutions that enable rapid air-gapped recovery using best-in-class storage, compute, networking, and software

Should all else fail, the HPE Cyber Resilience Vault provides you with a Zero Trust architecture that is isolated and offline, keeping immutable data copies secure.

Data driven into the future

Both hybrid cloud and exponentially expanding data volumes are permanent fixtures of our data-driven world. But even against a backdrop of ongoing threats, they need not be deterrents to business continuity nor to continued innovation.

Safeguarding and protecting critical data will continue to be essential today, tomorrow, and in the future. With the right tools and modern approaches in hand, organizations can rise to this challenge confidently and remain assured that their data-driven business is well-positioned to succeed in the years and decades ahead.

About HPE

HPE is the edge-to-cloud company that helps organizations accelerate outcomes by unleashing value from all of their data, everywhere. Built on decades of reimagining the future and innovating to advance the way people live and work, HPE delivers unique, open, and intelligent technology solutions, with a consistent experience across all clouds and edges, to help customers develop new business models, engage in new ways, and increase operational performance.

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