HPE

Business white paper

A DATA-DRIVEN APPROACH TO SIMPLIFYING DATA MANAGEMENT COMPLEXITY

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Executive summary

This paper reveals the risks posed by data management complexity and the value of simplifying data management, as you advance as a data-driven business. The paper then identifies specific approaches and solutions businesses can use to simplify data management complexity with an emphasis on the value of delivering a cloud operational experience everywhere.

Challenges and risks of data management complexity

There is a growing divide between organizations who've sprinted ahead — and those being left behind. The divide is being widened by data because businesses are finding it difficult to unlock the value of data. Doing so is not easy. You must ensure data remains available 24x7 to power applications and that the business can run applications efficiently and effectively. You must protect data from ransomware, cyberattacks and disruptions, and make data accessible. And you must contend with ever-increasing complexity.

That complexity typically comprises siloed data, the need for specialized tools, constant firefighting, lengthy procurement processes, and provisioning cycles that hinder strategic business initiatives. Those challenges have only grown as IT resources and data have begun to span across edge, core, and cloud. The average organization today relies on 23 different management tools[1] to manage the lifecycle of their data and infrastructure. In fact, a recent study from ESG found that 76% of respondents indicate their current data management capabilities cannot keep up with their business's demands.[2]

Data management complexity has the potential to hold customers back, at the cost of agility, innovation, and risk. As the amount of data in the enterprise grows, so does the importance of simplifying its management. Doing nothing, or not doing enough, to simplify data management — in fact, anything short of moving immediately and decisively — all but places you in a scenario to fall behind the competition.

[1] Why Being a Data-first Leader Matters, ESG eBook commissioned by HPE, 2022

[2] Being a Data-first Leader Continues to Matter ESG eBook commissioned by HPE August 2023 By Scott Sinclair, Practice Director, Cloud, Infrastructure, and DevOps

Simplifying data management is essential to data-driven transformation

Being data-driven is about making data a focal point of every aspect of your business. Data-driven transformation focuses more on data and the value it can create and less on simply modernizing infrastructure. To remain competitive, a data-driven business must remove any barriers to keeping data available and easily accessible.

Hewlett Packard Enterprise can help speed you on the path to removing data management complexity by enabling you to:

— **Eliminate siloed data and manual processes.** Simplify data and data infrastructure to eliminate silos and manual processes that leave IT professionals fighting fires instead of focusing on innovation.

— **Streamline and automate management across the data lifecycle.** Automate the complete data lifecycle across distributed hardware and software. Harness and scale data that is growing at an unprecedented rate, and protect and recover data in the face of new threats and challenges.

— **Seamlessly manage different data types and formats across hybrid environments from a single user interface.** Work around barriers that isolate data across edge, multiple clouds, and on-premises environments, limiting accessibility.

Addressing all these challenges to gain the value and agility of your data might seem a bit overwhelming, so here are three ways that you can start to simplify data management.

1. Transform your business with a cloud operational experience everywhere

2. Simplify data access

3. Modernize data protection

Transform faster with a cloud operational experience

The speed and agility of a cloud operational experience everywhere holds the key to removing complexity. Public cloud has set the standard for agility with a cloud operational model that enables line of business (LOB) owners and developers to build and deploy new applications, services, and projects faster than ever before. This renders underlying infrastructure invisible, enabling a shift to app-centric operations. Now, extending that idea further, organizations are seeking to bring the benefits of the cloud operational experience to wherever their data and app workloads live, from edge to on-premises to colocation.

Simplifying operations and moving faster with a cloud experience everywhere is critical to organizations. According to recent research from ESG, 89% of respondents agree that achieving a mature cloud operations model for on-premises infrastructure is key.[3] And this is important because most enterprise apps and data remain outside the public cloud because of data gravity, latency, application dependency, and regulatory compliance reasons.

The path to enabling experience everywhere has opened only recently. To power their data-driven transformation strategies, organizations have been rapidly shifting to an everything-as-a-service model. But the ability to unlock agility and drive innovation — to enable a cloud operational experience — with storage as a service (STaaS) has been limited to date because of challenges associated with current offerings.

For starters, managed services come at a premium. Customized, managed service offerings are the right fit for large-scale customer deployments — but they come at a higher cost. Moreover, most STaaS offerings, which typically commit to four nines of availability, are not suitable for mission-critical applications that require six nines or even 100% availability. Finally, current on-premises STaaS vendors don't deliver self-service agility: they've introduced pay-as-you-go consumption, which is fine as far as it goes, but customers must still deal with a traditional storage management experience, including the need for storage domain expertise around Day 2 operations and beyond.

In that context, here are some key capabilities to look for in a STaaS platform:

— **Go faster with self-service agility.** True STaaS changes the storage management game entirely — by bringing cloud operational agility and simplicity to data infrastructure across edge to cloud. Organizations can simplify on-premises storage with the speed and agility of an AI-driven cloud operational experience. This makes underlying infrastructure invisible while shifting operations to be app-centric, not infrastructure-centric. LOB and database admins can effortlessly procure and provision storage to accelerate app deployment — freeing up IT resources to work on strategic, higher-value initiatives.

[3] Being a Data-first Leader Continues to Matter ESG eBook commissioned by HPE August 2023 by Scott Sinclair, Practice Director, Cloud, Infrastructure, and DevOps

— **Reduce risk by running any app without compromise.** True STaaS should meet any service-level agreement (SLA) for any app, from traditional to modern, with exactly the right performance, resiliency, and efficiency. This is how true STaaS enables you to leap across the transformation divide. Instead of having to select a specific storage system or configuration, you can drive innovation and productivity. Simply choose the service levels that your workloads require with an as-a-service portfolio of proven, enterprise-grade, on-premises cloud data services. Nothing to hold you back, and everything you need to accelerate. Make the best choice for your critical enterprise applications with a STaaS solution that guarantees 100% data availability for mission-critical apps, as well as six-nines for all other workloads.

— **Accelerate the performance of your most data-intensive applications.** Legacy storage systems cannot keep pace with the growing and unpredictable demands of data-intensive workloads. That's why many organizations deploy disaggregated, scale-out storage that enables independent scaling of capacity and performance for greater efficiency and lower cost. You gain the flexibility to fine-tune, adapt, and elastically scale storage environments in line with workload requirements and evolving business needs. Modular multi-protocol storage also provides flexibility and high performance for both block and file storage needs. Organizations can deploy multiple data types and workloads on common hardware with a unified cloud experience — reducing silos and complexity and improving TCO/ROI.

— **Speed time to value and slash costs by consuming as a service.** Your STaaS solution should empower your organization to shift from buying and maintaining data infrastructure to simply accessing and utilizing it. A flexible, as-a-service consumption model helps you avoid over- and under-provisioning concerns, budget constraints, and complex procurement cycles. How so? First, by getting started quickly and easily with instant, SLA-driven quoting and rapid ordering. Second, by scaling on-demand and as necessary, with buffer capacity for unexpected workloads or usage demands. And third, by moving from heavy up-front costs to transparent, predictable monthly payments based on actual metered consumption — with complete visibility into your storage utilization at any time.

When it's done right, STaaS can eliminate storage complexity by bringing the speed and agility of a cloud operational experience to apps and data everywhere. This frees up organizations to simplify operations and move faster — while maintaining control of your data on-premises.

In bringing the self-service cloud operational model to on-premises workloads, STaaS helps speed digital transformation in a way that's data-driven. That means empowering LOB and application admins to accelerate app deployment by effortlessly self-provisioning storage — instantly, and without going to the public cloud. And it enables IT teams both to transform from operator to service provider and to start managing business outcomes instead of infrastructure.

Simplify data access by unifying data

Data has always been valuable. Businesses collect data across multiple channels such as e-commerce, social media, warranty data, edge sensors, and Internet of Things (IoT) devices. When businesses can access that data and apply analytics, AI, and ML, companies can gain insights into customer behavior, improve operational efficiency, and predict future outcomes.

While the potential value that data offers remains the same, data types and formats have changed. Different data types stored across multiple physical locations continue to grow. Growth is also attributed to new data sources, such as edge and streaming data from video and sensors which contain valuable insights. This has created countless hurdles for organizations to overcome, such as:

— Having a single, unified data source even when data is distributed across multiple physical locations

— Establishing a simple way to onboard new data sources

— Providing real-time access to data regardless of its location

— Reducing the complexity associated with multiple tools to analyze different data types

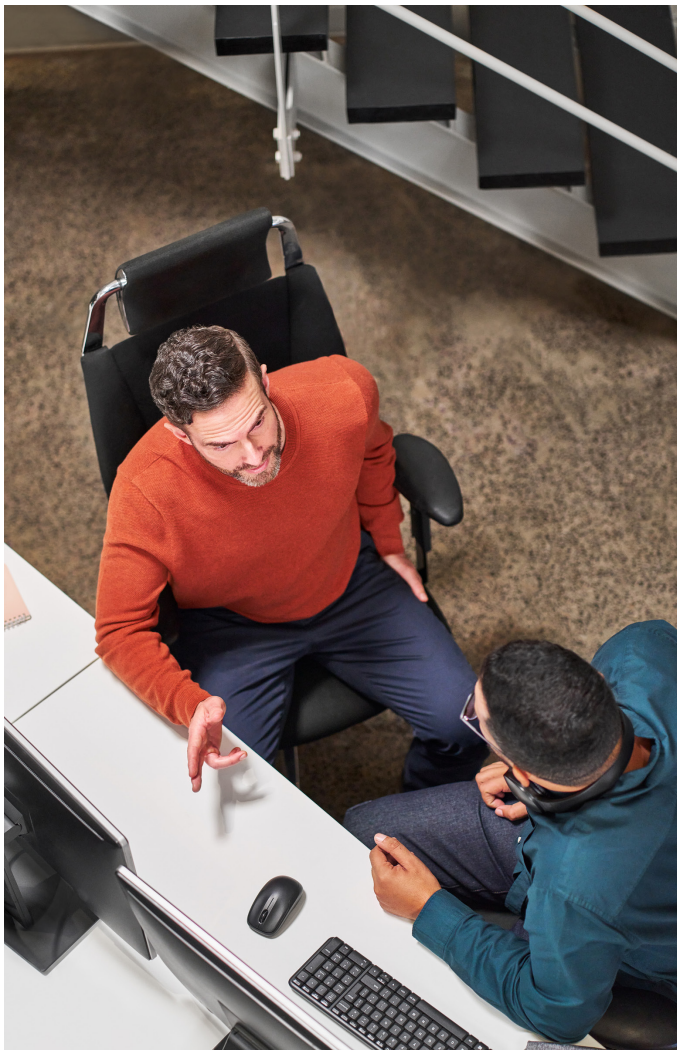
— Achieving the above with a finite set of resources

Placing large amounts of data into a cloud, data lake, or warehouse does not automatically create meaningful insights. What you need is an innovative approach to manage and glean value from data. Depending on your business's unique needs, data fabric technology could be an excellent choice.

Data fabric technology is seeing rapid adoption across global enterprises. Data fabric solutions incorporate autonomous functions that accelerate data intelligence by making advanced automation easier. The functions facilitate integration of both legacy and modern technologies, allowing data to reside in its native format within the data fabric.

With the goal of simplifying data management, data fabric technology combines different types of data into a comprehensive view that makes it easier to identify trends and anomalies as well as search across both structured and unstructured data sets. It also provides real-time access to comprehensive data required by data scientists, engineers, and other data consumers to generate trusted insights and innovations.

An HPE data fabric provides unified control and management of hybrid multicloud deployments. Different data types, formats, and platforms are federated into a single logical data store without complex extract, transform, load (ETL) processes and copying of data. Users, apps, and workloads access data from a single point, known as a global namespace, simplifying access and management of hybrid data sources regardless of their location. To simplify management further, data fabric automates key management functions such as security, access controls, management, and governance across hybrid data locations. Support for industry standard APIs, self-service access, and the ability to search the metadata, enables data analysts, engineers, and scientists to directly access what they need instead of managing infrastructure.



Modernize data protection

As you make more data readily accessible, protecting it is a key element in data management. The data that is your business's life force is at increasing risk. You may make every effort to safeguard your data and keep mission-critical applications highly available. But you still face system downtime caused by factors such as hardware failures, power failures, and natural disasters. At the same time, cybercriminals take advantage of the data growth across edge to cloud to conduct malware and ransomware attacks. Attempting to meet your data protection needs with legacy backup solutions is subject to diminishing returns.

When it comes to data protection modernization, most businesses realize they cannot afford to wait. According to ESG, two-thirds (66%) of organizations see room to improve when it comes to protection efficacy across their entire environment.[4]

If you are considering the transition to data protection as a service (DPaaS), you're not alone. Recent research indicates the importance of these emerging services in cloud-centric strategies. In large part, that's because cloud services improve efficiencies by reducing cost, risk, and complexity. Protecting data on-premises and in a hybrid cloud environment sets you up to deliver on future SLAs, enabling you to meet demanding RPOs and RTOs — while keeping your business moving ahead.

New DPaaS offerings have redefined backup and disaster recovery with the simplicity and flexibility of the cloud experience. Cloud-native services can eliminate the complexity of protecting your data and free you from the day-to-day hassles of managing the backup and disaster recovery infrastructure. The innovative approach lets you meet SLAs in hybrid cloud environments and simplifies your infrastructure, driving significant value for your organization.

Data protection modernization provides your organization with an opportunity to:

— Simplify backup and disaster recovery operations to make it easier to protect data across every SLA

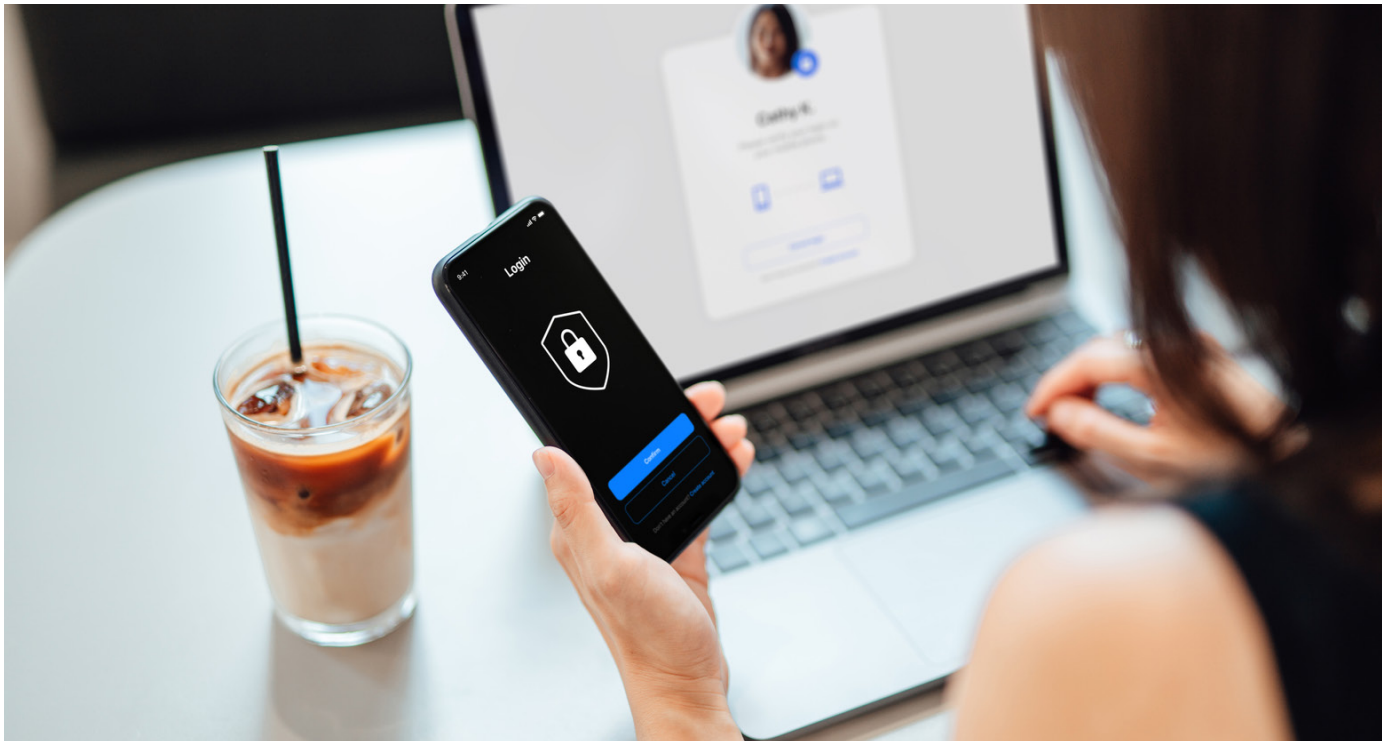
— Effectively protect data from ransomware attacks, while complying with data protection regulations

— Align infrastructure to actual use to optimize resources and avoid costly overprovisioning

— Eliminate silos by streamlining data protection operations across on-premises and hybrid cloud

With data protection solutions from HPE, you get the peace of mind that your data is rapidly recoverable, always secure, and provides value to your business without compromise.

[4] HPE Data and Infrastructure Management Maturity Research Results by Enterprise Strategy Group June 2023



Conclusion

Data is the life force that activates next generation operating and business models to move your business forward, faster. But to unlock your data's value you must eliminate the data and infrastructure management complexity, silos, and risks across edge to cloud that slow you down.

HPE can help you simplify data management with cloud operations everywhere, a unified fabric for data access, and modernized protection for your data. Empowering you to unleash the power of your data, increase your business's agility and innovation, and accelerate your data-driven digital transformation journey.

Learn more about how to:

— Transform faster with a cloud operational experience:

- HPE GreenLake for Block Storage
- HPE GreenLake for File Storage
- HPE Alletra Storage

— Simplify data access: HPE Data Fabric Software

— Modernize data protection with HPE GreenLake for Backup and Recovery and HPE GreenLake for Disaster Recovery

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