HPE GreenLake

Storage as a service buyer's guide

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Transform faster with cloud operations

Using data to transform your business

Regardless of industry, if you're a business or IT leader today, you're seeing the emergence of the digital transformation divide: a gap between those organizations who've sprinted ahead and those being left behind. Despite major investment in digital transformation, 67% of CEOs feel they're losing ground, according to KPMG[1] while top performers have doubled their profits in the last 12 months, according to McKinsey.[2] In a word, digitalization has become do or die.

What's driving this transformation divide? Data. It's the life force of the modern enterprise. Data-first modernization is key to activating next-gen operating and business models that drive your business forward, faster—across the transformation divide. Unlocking the value of data for supply chains, distribution models, product development, manufacturing, marketing, sales, and more enables you to accelerate decision velocity, speed innovation and time to market, reimagine customer experiences, and improve operational efficiency.

Simply put, data-first modernization shifts the focus from infrastructure-centric transformation to data-centric value creation and elevates data as the preeminent organizing principle of a company.

[1] KPMG 2021 CEO Outlook, KPMG, 2021

[2] "The great acceleration," McKinsey & Company, 2020

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Understanding why complexity is the enemy

But here's where IT complexity gets in the way. Achieving data-driven modernization requires that you first confront and eliminate the operational complexity, management silos, specialized tools, constant firefighting and complex procurement, and provisioning cycles that slow you down. Those challenges have only grown with the advent of IT resources that now span across edge, core, and cloud. As an example, the average organization today relies on 23 different data management tools to handle the lifecycle of their data and data infrastructure.[3] That's unsustainable.

Complexity impacts everyone

All this complexity impacts multiple personas across your organization. It impacts agility with IT tied up in routine tasks as opposed to higher-value strategic initiatives. Constant firefighting and app disruptions increase risk—hindering IT's ability to deliver on SLAs. Complex procurement and provisioning inhibit the pace of innovation for line of business and app owners—slowing downtime to value for new apps and services. And up-front capital expense and overprovisioning increase cost—constraining cash flow, capital utilization, and ROI.

A recent study found that 39% of businesses typically wait anywhere from three to six months for new storage resources to arrive and could lose up to $250K of revenue from storage disruptions during that time. And because of these two facts, 53% of companies prepare by overprovisioning capacity by at least 10% to 25% with 44% overprovisioning by more than 25% during the initial purchase.[4]

[3] ESG Data Management Survey, ESG, April 2021

[4] "The Pulse of Storage and Compute Consumption in 2020," Futurum Research, January 2021

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Doing nothing comes at a cost

Many organizations have overlooked data infrastructure complexity in the past, but ignoring the problem is no longer an acceptable strategy. The ever-increasing volume and value of data in today's systems are driving the problem higher up the strategic agenda. And in today's business world—where the fast overtake the slow—an increasing number of executives rightly fear displacement by more data-driven competitors. It's no surprise then that 93% of IT decision-makers say data complexity represents a critical hindrance to the velocity of business transformation—lowering agility, efficiency, and innovation but also elevating business risk, according to ESG.[5] Meanwhile, 74% acknowledge their data management capabilities can't keep pace with business requirements,[6] and 59% view the situation as worsening over time—and more difficult to rectify as time goes on.[7]

Simplify operations and move faster with a cloud experience everywhere

So, what's the answer? The cloud model holds the key. Public cloud has set the standard for agility, with a cloud operational model that enables line of business owners and developers to build and deploy new applications, services, and projects faster than ever before. Cloud operations render underlying infrastructure invisible, enabling a shift to app-centric operations.

Now, take that idea a step further—a cloud operational experience that simplifies data management wherever apps and data live, from edge to cloud. Why is that important? Right now, up to 70% of enterprise apps and data remain on-premises[8]—in data centers, co-locations, and at the edge—for good business reasons: data gravity, latency, application dependency, and regulatory compliance. True data-first transformation must encompass the entire enterprise.

Based on research from ESG, IT leaders agree that simplifying operations and moving faster with a cloud experience everywhere is critical to organizations. 91% identify mature cloud operations on-premises as the single most important step to eliminating complexity, and more than four out of five say they are under pressure to deliver more cloud experiences to end users.[9]

[5, 7] ESG Data Management Survey, ESG, April 2021

[6, 9] HPE Data Management Maturity Research, ESG on behalf of HPE, November 2021

[8] IDC Cloud Pulse

Three keys to the power of storage as a service

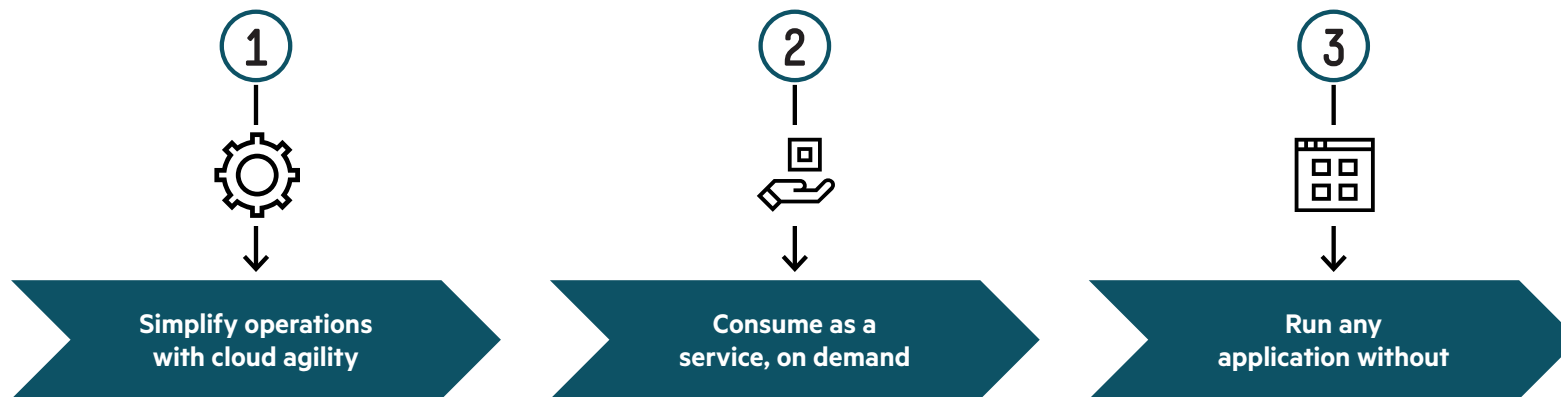**Cloud operations is a game changer for storage as a service**

So, simplifying data management and data infrastructure with a cloud operational experience everywhere—the essence of data-first transformation—must be top of mind for IT leaders. But where do we begin?

We would suggest the answer lies with your storage. A key part of the transformation journey involves primary storage moving to an as-a-service model—which, done right, can be an entry point to precisely the kind of cloud operational experience we've described previously. Storage as a service (STaaS) radically simplifies and automates storage operations, enabling IT to meet ever-increasing business needs and deliver the agility that line of business owners and developers require to go faster.

Organizations are rapidly modernizing on-prem data infrastructure to power data-driven transformation by moving to a STaaS model. You likely know that STaaS lets you consume resources where and when you need them—and that's a significant benefit to every organization. But on-demand consumption is only the beginning of the STaaS experience.

That's because true, no-compromise STaaS enables simplified data management through a cloud operational experience across your infrastructure. STaaS harnesses the agility and flexibility of cloud operations—not just to enable on-demand consumption but to transform IT from operator to service provider, aligning storage with business demands and enabling IT to focus on accelerating outcomes and not managing infrastructure.

In that context, there are three key capabilities to look for in every true STaaS platform:

①	②	③
Simplify operations with cloud agility	**Consume as a service, on demand**	**Run any application without**

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Simplify operations with cloud agility

Consume as a service, on demand

Run any application without compromise

Simplify operations with cloud agility

True STaaS changes the storage management game entirely—by bringing cloud operational agility and simplicity to data infrastructure across edge to cloud. Leveraging AIOps, true STaaS makes underlying data infrastructure invisible—eliminating silos, complexity, and the burden of day-to-day storage administration while shifting operations to be app, not infrastructure, centric. Even better, you can now provide the self-service agility that line of business owners and developers require to build and deploy new apps, services, and projects faster—which also frees your IT resources to work on strategic, higher-value initiatives.

Most 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.

Unlike the traditional storage management experience common to other STaaS options, true STaaS should simplify on-premises storage management across the lifecycle. Here's a look at the end-to-end self-service, AI-driven cloud experience customers can get.

Start fast
Get moving quickly and easily with instant, SLA-driven quoting and rapid ordering. Instead of having to select a specific storage system or configuration, you should simply choose from four key service parameters—availability tier, performance level, reserve capacity, and subscription term—for your desired SLA. In other words, you select the outcomes you need for your apps, and your STaaS vendor takes care of the rest, delivering and deploying the right data infrastructure to meet your requirements.

The infrastructure should be owned by the STaaS vendor but operated by your team. You leverage the convenience of a flexible subscription to move from an ownership model to an access model. As a result, your IT staff no longer need to worry about time-consuming forecasting, procurement, maintenance, upgrades, and decommissioning activities—and no more complex tech refresh cycles.

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Simplify operations with cloud agility

Consume as a service, on demand

Run any application without compromise

Simplify and accelerate provisioning

Provisioning data for workloads today is currently a complex, time-consuming, and LUN-centric-driven task beset with guesswork. Admins must work through spreadsheets to work out capacity and performance headroom across their fleet of data infrastructure to decide where an application should be deployed to meet workload and app service levels. Lengthy provisioning periods mean line of business managers, database administrators (DBAs), and developers cannot access storage capacity at the pace they are expected to—which is also the pace they know they could obtain in the cloud.

The alternative is to automate and optimize app deployment with intent-based provisioning. This unique service eliminates guesswork and spreadsheets by transforming storage provisioning from a LUN-centric, manual process to an AI-driven, app-centric approach. Just select the storage tier and workload type, specify the capacity and protection policy, and let AI-driven intelligence automatically optimize your SLAs by recommending the best-suited system across your fleet for your new workload.

Gain agility with self-service provisioning

Intent-based provisioning, combined with role-based access control, gives you a true self-service cloud provisioning experience, without the need for storage expertise. It enables line of business and app owners to deploy apps faster by slashing storage provisioning time from days or weeks to minutes. Experience unparalleled operational time savings—and free up IT resources to work on strategic, higher value-added initiatives.

Ensure quality of service for mission-critical apps

To make workload provisioning even easier, your STaaS solution should provide intelligent quality of service (QoS) for critical workloads. Intelligent QoS enables customers to set priorities on a specific volume or application group that ensure performance expectations are always met. In the event of resource contention, volumes with the lowest priority are capped.

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Manage from anywhere

True STaaS should separate the infrastructure control plane from the underlying hardware and move it to the cloud. This provides 100% cloud-managed infrastructure, which means you can globally monitor and manage your entire fleet of storage from a single SaaS-based cloud console—accessible from any location, on any device. Even better, the cloud-native control plane scales autonomously with infrastructure, so managing hundreds of systems across geographies is as simple as managing one.

Invisible upgrades

Thanks to SaaS-based delivery, new data services should instantly become available to you. Data plane software upgrades should be nondisruptive and intelligently matched to a given system.

Automate at scale

Finally, the cloud-native control plane should be highly extensible, with a fully programmable, unified API across edge-to-cloud infrastructure. This single API endpoint for the entire infrastructure should allow organizations to automate the management of their storage resources at cloud speed and scale without worrying about API versions, feature compatibility, or multiple scripting.

Put storage on auto-pilot with an AI-managed service

The cloud operational experience should be powered by data-driven insights and intelligence with advanced AI for infrastructure. Why is that important? Because now your organization can say goodbye to endless firefighting, thanks to AI-powered autonomous operations that ensure apps are always-on and always fast.

With an AI-managed service, customers can predict and prevent disruptions before they occur across the stack and pinpoint issues between storage and VMs and underutilized virtual resources. Moreover, your admins can rely on AI-driven recommendations to take the guesswork out of managing data infrastructure while eliminating time-consuming, frustrating escalations through predictive support automation and direct access to experts.

Simplify operations with cloud agility

Consume as a service, on demand

Run any application without compromise

Consume as a service, on demand

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 means you avoid overprovisioning and underprovisioning concerns, CAPEX budget constraints, and complex procurement cycles.

How so? First, by easily getting the storage resources needed with workload-optimized storage tiers delivered in days. 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.

Simplify operations with cloud agility

Consume as a service, on demand

Run any application without compromise

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Run any application without compromise

True STaaS should meet any 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.

Most storage-as-a-service offerings, which typically commit to four nines of availability, are not suitable for mission-critical applications that require six nines or even 100% availability. 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 6x9s for all other workloads.

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Accelerating outcomes with storage as a service

If you're not looking at solutions that can deliver the three critical capabilities described previously, you're not looking at true STaaS, and you're missing out on the transformational potential of truly on-demand, intelligent data management.

Moving to true STaaS can accelerate, scale, and derisk data-first modernization—enabling your organization to evolve from IT operator to service provider, align storage with business demands, and focus on accelerating outcomes not managing infrastructure.

An on-prem cloud operational experience delivers the self-service procurement and self-service provisioning agility that line of business owners and developers require to build and deploy new apps, services, and projects faster—and frees up IT resources to work on strategic, higher-value initiatives.

And a flexible pay-as-you-go, scale-on-demand cloud ownership experience shortens project deployment times, frees up capital, aligns spending with the needs of the business, and boosts financial flexibility.
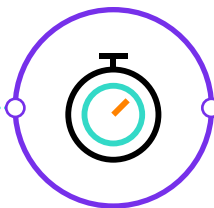
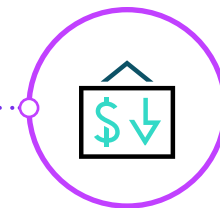Moving to STaaS can accelerate the following outcomes for customers:

Boost agility—Operational time savings simplify storage with less time **keeping the lights on**

Lower risk—100% availability guarantee for mission-critical service;[10] a majority of issues predicted and automatically resolved with AI-managed service

Speed time to value—Shorter time to deliver projects

Reduce costs—TCO savings due to eliminated need for overprovisioning

[10] HPE Storage Substantiation

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Everything as a service

Keep in mind, the on-demand cloud data services of your chosen STaaS solution shouldn't just end at storage. Look for a solution that offers a comprehensive suite of cloud data services with a unified cloud operating experience that enables your organization to modernize data management when and where they need it—all in just a few clicks. For example, a backup and recovery service that gives you effortless cloud backup, from a single pane of glass, to meet all the backup SLAs across your hybrid cloud.

More than that, the STaaS platform that's really going to amplify your transformation journey is the one that can take the cloud operational experience beyond STaaS to meet all your IT requirements as you modernize and grow. This enables on-demand access to myriad cloud-based services including compute, networking, database, HPC, containers, artificial intelligence (AI), virtual desktop infrastructure (VDI), and third-party applications.

Consider the benefits of meeting your entire IT infrastructure as a service need, including third-party applications, through a single vendor, on a single monthly bill, with the first line of support through one vendor.
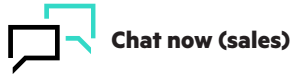
Take your next step

Your data, your agility, your innovation—unleashed

In the end, to fast-forward data-driven modernization, organizations must focus on eliminating the infrastructure management complexity that continues to slow them down. And that's precisely what makes choosing the right STaaS solution so critical.

STaaS should eliminate storage complexity by bringing the speed and agility of a cloud operational experience to apps and data everywhere. This frees up organizations like yours to simplify operations and move faster—while maintaining control of your data on-premises.

In bringing the self-service cloud operational model to on-prem workloads, true STaaS helps organizations speed digital transformation through data-first modernization. That means empowering line of business 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.

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