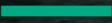




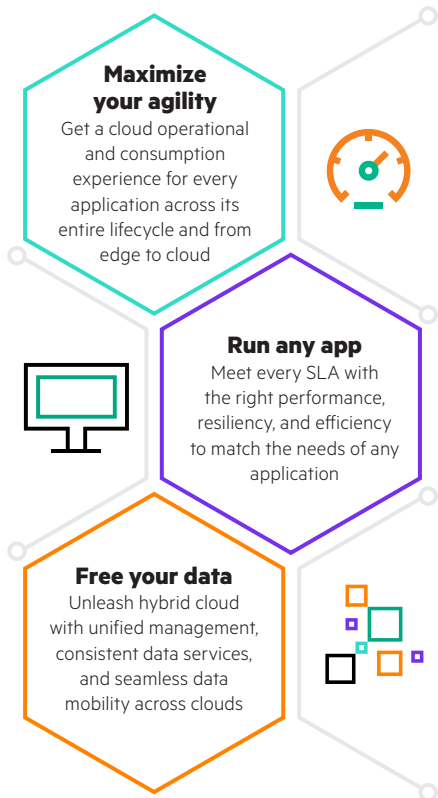
Hewlett Packard  
Enterprise

# HPE ALLETRA

Power your data from edge to cloud



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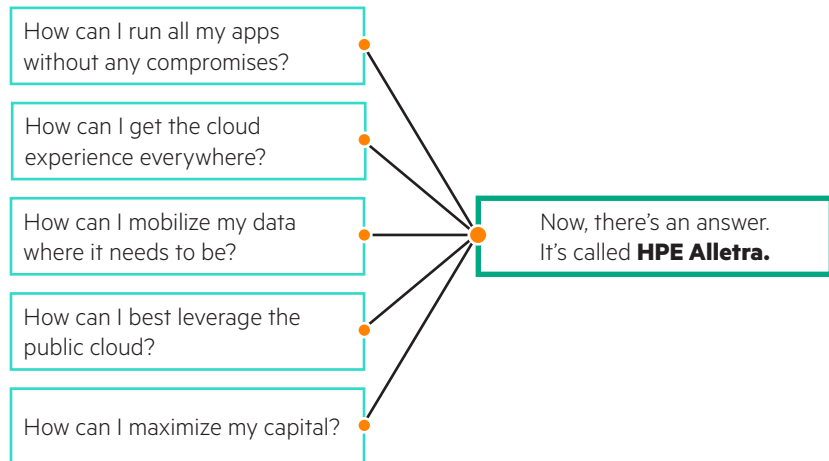


## FREE YOURSELF FROM THE COMPLEXITY OF HYBRID CLOUD

Your data has never been more valuable. It has the potential to transform your business—by accelerating innovation, improving the customer experience, and driving operational efficiency. Achieving this kind of data innovation requires a generational shift in the application landscape, but it also entails the complexity of deploying and maintaining more infrastructure than ever before.

Cloud has set the standard for agility with on-demand access, resource elasticity, and charges for services based on actual usage. Organizations love that cloud experience—so much so that they want the cloud experience for all their applications data, wherever they live.

And, more to the point, without a cloud everywhere experience, your infrastructure can't keep up with the speed of business today. You're stuck maintaining, upgrading, and tuning on-premises, edge, and cloud storage in isolated, complex silos. That's why you keep asking yourself:



## WE'RE DELIVERING A PARADIGM SHIFT IN DATA INFRASTRUCTURE

It's time to shed the complexity and silos inherent in conventional hybrid cloud environments. HPE Alletra is cloud-native data infrastructure powered by Data Services Cloud Console. Together, they give you a cloud operating and consumption experience wherever data lives. Built for every app, from traditional to modern, HPE Alletra spans workload-optimized systems to deliver architectural flexibility without the complexity of traditional storage management. By mobilizing data across clouds, HPE Alletra unleashes the true potential of your hybrid cloud.

## STOP MANAGING DATA INFRASTRUCTURE AND START CONSUMING IT

Move from owning and maintaining data infrastructure to simply accessing and utilizing it—on demand and as a service. Power your data from edge to cloud so you can maximize your agility, run any application, and free your data everywhere.

**99%** operational time savings<sup>1</sup>     **100%** availability guaranteed<sup>2</sup>     **40%** IT resource savings<sup>3</sup>

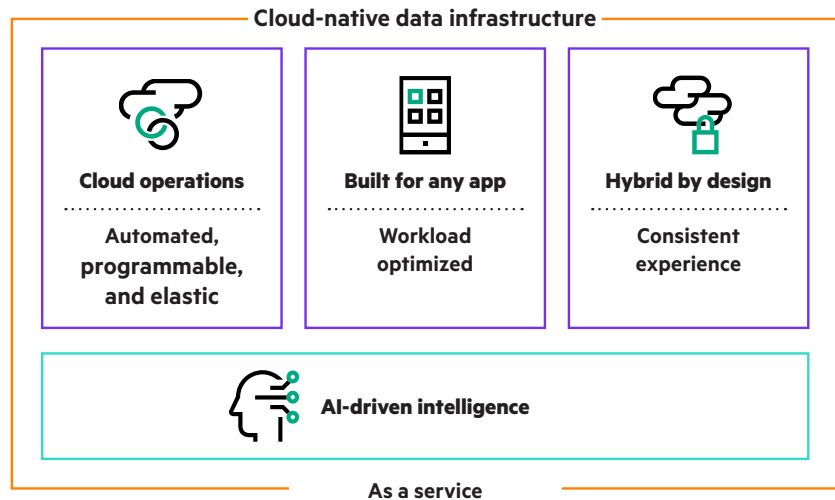
<sup>1</sup> Comparison of infrastructure lifecycle management of HPE Alletra vs. ESG Market Research, April 2021

<sup>2</sup> "Uptime guarantees that deliver," May 2021

<sup>3</sup> A commissioned study conducted by Forrester Consulting, *The Total Economic Impact of HPE GreenLake*, June 2020



## WITH HPE ALLETRA, A NEW CATEGORY OF DATA INFRASTRUCTURE EMERGES



**FIGURE 1.** Core principles required for cloud-native data infrastructure

To bring the cloud experience to every workload, you need a new approach to data infrastructure—one that’s cloud-native by design. Purpose-built for cloud operations and consumption from edge to cloud, cloud-native exploits the advantages of the cloud computing delivery model and ensures IT resources are always-on and instantly available. Cloud-native data infrastructure is underpinned by intelligence, effortless to manage, and available as a service to instantly respond to any demand.

With the power of cloud-native, you can run any application, from traditional to modern, without the complexity of traditional storage management. And you can break down silos between clouds via seamless access to data and a consistent experience that maximizes resources across on-premises infrastructure and public cloud.

## HPE ALLETRA IS DESIGNED FOR UNIQUE VALUE

To deliver the cloud experience wherever data lives, HPE Alletra is architected with the following core innovations:

### AI-driven

Powered by HPE InfoSight, the industry’s most advanced AI for infrastructure, HPE Alletra delivers a unique experience. Through cloud-based machine learning, HPE Alletra provides a predictive model of support and management that predicts and prevents problems—from storage to virtual machines. The same technology enables HPE Alletra to transform the support experience via direct access to experts. Additionally, AI-driven recommendations improve performance, drive higher availability, and optimize resource utilization and planning.

### Built for cloud

HPE Alletra is engineered to be tightly coupled with Data Services Cloud Console. This enables a common, cloud operational experience across workload-optimized systems on-premises and in the cloud. That means you’ll experience the same agility and simplicity for every application across its entire lifecycle and from edge to cloud. Deploy, provision, manage, and scale your storage in 99% less time with a platform that sets up in minutes, automates provisioning, and upgrades transparently and without any hassle.

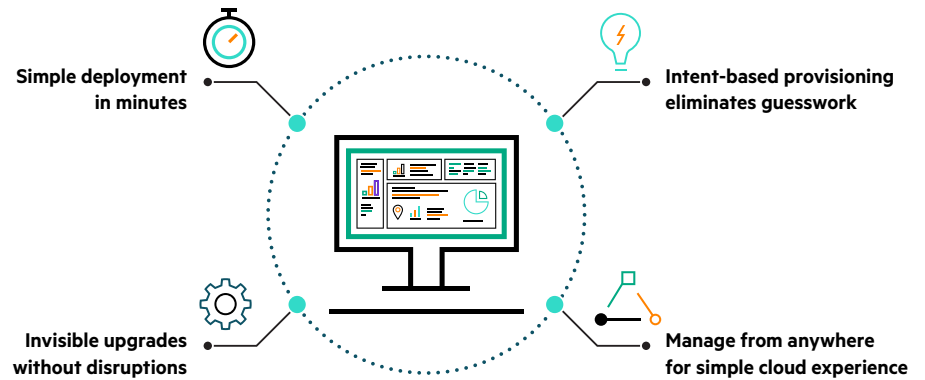
### As a service

Avoid over-provisioning, reduce infrastructure costs, and ensure you can respond to any business need with storage as a service. With HPE GreenLake, you can consume HPE Alletra as a service for pay-per-use, scale-up-and-down freedom—or have it managed for you, for a complete turnkey solution. Free up your cash flow and increase financial agility with the right mix of subscription and usage-based services.



## HPE ALLETRA MAXIMIZES YOUR AGILITY

Get the cloud operational and consumption experience for every application from edge to cloud. By abstracting the data infrastructure control plane from the data plane and moving it to the cloud, you get a single, consistent operational experience across HPE Alletra fleets. Operate at cloud speed and scale—and easily orchestrate data infrastructure across its lifecycle with simple deployment, AI-driven intent-based provisioning, and invisible upgrades.<sup>4</sup>



**FIGURE 2.** HPE Alletra powered with Data Services Cloud Console

**Simple deployment:** Deploy data infrastructure in minutes, with no IT specialist required. New systems are automatically discovered, onboarded, and configured. Simply cable up the system, power it on, and Data Services Cloud Console is designed to do the rest—giving you the reliability and security of on-premises infrastructure with the agility of cloud.

**Intent-based provisioning:** Make provisioning applications at scale effortless. Eliminate the guesswork and the spreadsheets by ensuring applications are deployed on the right resources across a global fleet. Shift from storage provisioning based on a LUN-centric, manual process to an intent-based, AI-driven approach, one in which real-time context into resource headroom and application-specific SLAs automatically select where data is stored and protected.

**Invisible upgrades<sup>5</sup>:** Make use of new features and enhancements instantly through cloud-delivered upgrades. Everything is delivered as a service, ensuring you remain up to date without any disruptions.

**Manage from anywhere:** Have everything you need, at your fingertips. Manage data infrastructure across its lifecycle with an intuitive software-as-a-service (SaaS)-based user experience that’s accessible from anywhere and on any device. Drive automation at cloud speed and scale so that managing thousands of systems across geographies is as simple as managing one.

**Consume as a service:** Free up your cash flow and increase financial agility. Choose flexible consumption options; or consume resources as a service via HPE GreenLake for pay-per-use, scale-up-and-down freedom; or opt for a complete turnkey solution that’s managed for you.

<sup>4, 5</sup> Invisible upgrades is planned for a future release





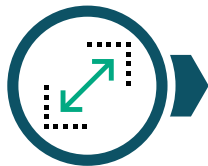
## HPE ALLETRA RUNS ANY APP

Built for every application from traditional to modern, HPE Alletra spans workload-optimized systems to deliver architectural flexibility without the complexity of traditional data infrastructure. Meet any SLA with the right performance, resiliency, and efficiency to match the specific needs of each application. Leverage purpose-built data infrastructure to meet mission-critical and business-critical requirements at the core; to power remote application requirements at the edge; and to drive test/dev and analytics workloads in the cloud.



### All-NVMe-accelerated performance

HPE Alletra systems support all-NVMe for accelerated applications and improved density. You can now consolidate traditional and modern mission-critical workloads at scale and without compromise. In just 4U, HPE Alletra 9000 delivers best-in-class storage performance density—with over 2M IOPS<sup>6</sup>—and is proven for 96 SAP HANA<sup>®</sup> nodes.



### Absolute resiliency

The AI-driven intelligence and no single point of failure platform of HPE Alletra together deliver guaranteed 100% availability for your mission-critical workloads.<sup>7</sup> Powered by HPE InfoSight, AI and ML predict and prevent disruptions across storage, servers, and virtual machines. Over the past decade, HPE InfoSight has analyzed application patterns across 1,250 trillion data points, transforming the way storage is managed and supported. HPE InfoSight has prevented thousands of disruptions, saving customers over 1.5 million work hours.<sup>8</sup>



### End-to-end security

Meet compliance requirements with built-in security. Deliver secure, FIPS 140-2 encrypted data infrastructure and help ensure compliance with robust authorization, access control, and logging capabilities across a reliable connection.



### Multi-site protection

Meet any recovery-point objective (RPO) and recovery-time objective (RTO) strategy with transparent business continuity across multiple sites—and then extend app-aware data protection to the cloud. Paired arrays are located at metropolitan distances; you can synchronously replicate data between them and present a highly available storage system to hosts connected to both.

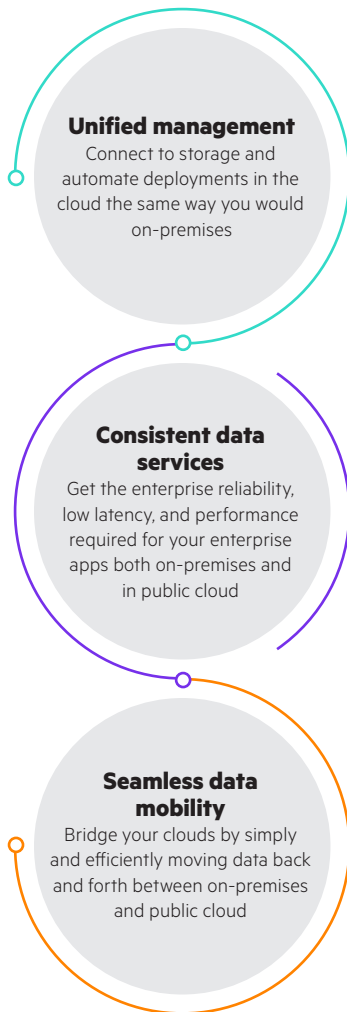
<sup>6</sup> Based on HPE Internal testing

<sup>7</sup> "Uptime guarantees that deliver," May 2021

<sup>8</sup> Based on the volume of critical issues proactively resolved for customers. Analyst White Paper by ESG: Assessing the Financial Impact of HPE Nimble Storage Powered by HPE InfoSight, May 2019

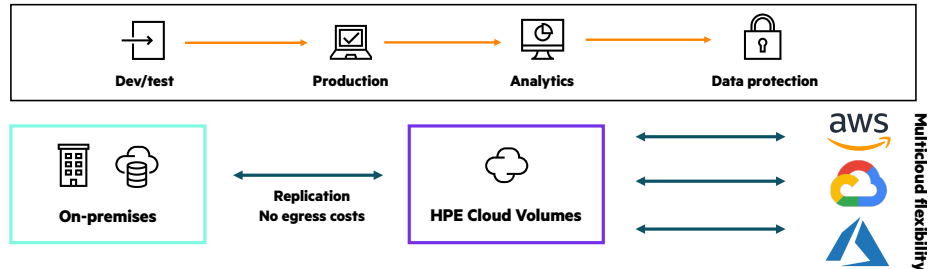
HPE Storage Substantiation





## HPE ALLETRA FREES YOUR DATA

Unleash the true potential of hybrid cloud with one platform delivering unified management, consistent data services, and seamless data mobility across clouds. Elevate your hybrid cloud flexibility to support each stage of your application lifecycle. Drive better business outcomes by moving on-premises data and applications to the cloud and back again without egress costs. In mobilizing data across clouds, you can get the best of every cloud to power your innovation.



**FIGURE 3.** Unleash the true potential of hybrid cloud

### Unified management across clouds

Your developers connect to HPE Alletra via consistent APIs, whether on-premises or in the cloud. With the ability to dynamically facilitate persistent volume provisioning, and to then expand or clone volumes or take snapshots of data for reuse, developers can drive continuous delivery and deployment.

HPE Alletra also provides persistent storage for modern or legacy apps and features a complete container ecosystem integration with the HPE Container Storage Interface (CSI)<sup>9</sup> Driver for Kubernetes. Developers can use the cloud for their development and testing needs while keeping their data secure in HPE Cloud Volumes.

### Seamless data mobility with no egress costs

With HPE Alletra and HPE Cloud Volumes, users get a seamless data fabric to move data across on-premises infrastructure and the public cloud without lock-in. Move on-premises data and applications to HPE Cloud Volumes and leverage the limitless compute resources of Amazon Web Services (AWS), Microsoft Azure, or Google™ Cloud Platform (GCP) to access that data for a variety of use cases—from dev/test and reporting to analytics, compliance, and archive. This means no complex data migrations when working in multiple clouds.

Data can be flexibly restored from HPE Cloud Volumes on-premises to HPE Alletra with no egress fees.

### Unlock the true potential of hybrid cloud

With HPE Alletra and HPE Cloud Volumes, you can unlock the true potential of hybrid cloud. For instance, you can start dev/test in the cloud; when you're ready to move the application into production, seamlessly bring it back on-premises for better cost control, data governance, VDI, etc. The same applies to an application born in the cloud—you can bring it back on-premises and continue to enjoy a cloud experience without complex data refactoring. Protect your application across every SLA, from rapid recovery to long-term retention, either on-premises or in the cloud, depending on your business requirements. As you look to gather insights and make sense of your data, it's important to flexibly make your production (and protected) workloads accessible in the cloud to drive analytic workflows.

HPE Alletra and HPE Cloud Volumes give you the ability to leverage every cloud to power innovation for your business.

<sup>9</sup> HPE Alletra integration with HPE CSI Driver for Kubernetes planned for June 2021



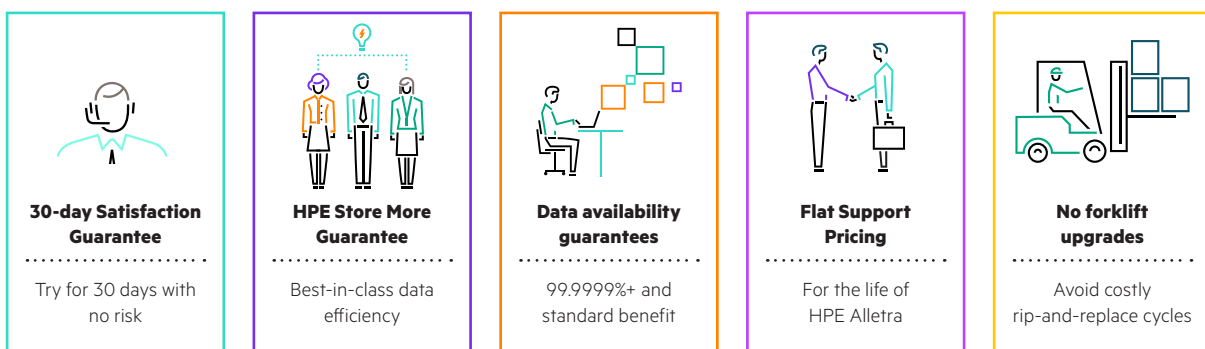


FIGURE 4. HPE Alletra, a radically simple storage experience

## HPE ALLETRA IS TIMELESS

We know you're tired of dealing with the unpleasant surprises that come with data infrastructure—unplanned downtime, forklift upgrades, and ever-increasing support costs. So, we've made it easy for you to switch to a radically simpler storage experience without the headaches—an experience that stays simple even as your business grows and your needs evolve.

**HPE Store More Guarantee:** Store more data per raw terabyte than the competition—and get more for less with better overall efficiency. We back this up with guaranteed data efficiency for your workloads.

**99.9999%+ availability, guaranteed:** Application uptime is more important today than ever. Loss of access to data means lost time and money. That's why HPE Alletra 9000 comes standard with a 100% availability guarantee and HPE Alletra 6000 comes standard with a 6-nines availability guarantee.<sup>10</sup>

**Transformed support:** Predictive support automation enables HPE Alletra to eliminate level 1 and level 2 support, providing you with direct access to experts and removing time-consuming and frustrating escalations.

**Predictable support pricing:** Get flat support pricing for the life of your HPE Alletra. Because you lock down this pricing up front, you're able to get the most out of your data infrastructure—worry free.

**No forklifts:** Break free from disruptive platform rip-and-replace cycles. Your HPE Alletra systems easily grow with your business. The value of your data infrastructure is protected by eliminating complex, lengthy, and disruptive data migrations.

<sup>10</sup> "Uptime guarantees that deliver," May 2021



## POWER YOUR DATA FROM EDGE TO CLOUD

HPE Alletra comes in two product lines—delivering agility and simplicity for every application from edge to cloud.



FIGURE 5. HPE Alletra 9000 for mission-critical workloads

### Mission-critical applications

HPE Alletra 9000 is ideal for your mission-critical workloads with extreme latency sensitivity and availability requirements. A unique, multinode, all-active platform delivers massive parallelization for consistent and predictable performance at scale. Consolidate traditional and next-generation mission-critical applications with ultra-low latency and a 100% availability guarantee.<sup>11</sup> With all-NVMe, HPE Alletra 9000 delivers best-in-class performance density with over 2 million IOPS<sup>12</sup> and certified for up to 96 SAP HANA nodes in just 4U.

HPE Alletra facilitates business continuity with automatic site failover across active sites and modernizes and extends data protection to the cloud.

**LEARN MORE AT**  
[hpe.com/storage/alletra](https://hpe.com/storage/alletra)

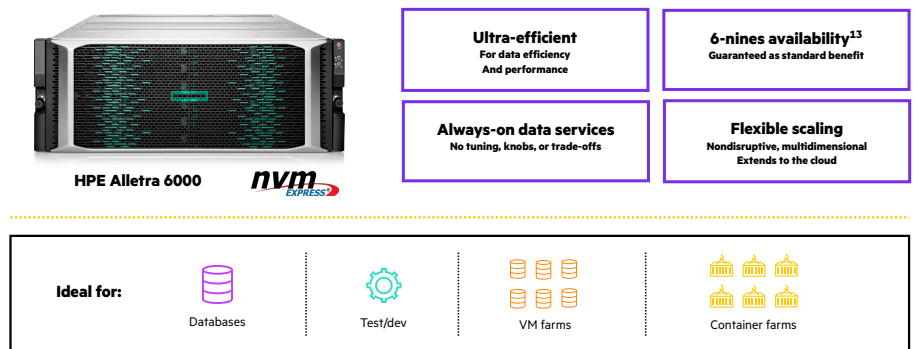


FIGURE 6. HPE Alletra 6000 for business-critical workloads

### Business-critical applications

HPE Alletra 6000 is ideal for your business-critical workloads with strict SLAs for availability and performance. It's built on an ultra-efficient architecture designed to deliver fast, consistent performance with industry-leading data efficiency. There are no knobs or configurations to adjust, and always-on data services and app-aware intelligence help eliminate performance and efficiency trade-offs. Get resilient storage for your organization with 6-nines availability guaranteed.<sup>14</sup> Deliver on your recovery SLAs with fast, simple, app-aware backup and recovery—on-premises and in the cloud.

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