

HPE Storage substantiation

HPE Alletra Storage MP B10000	Substantiation
The industry's first disaggregated, scale-out block storage with a 100% data availability guaranteed	Based on analysis of known industry block storage-as-a-service offerings available as of March 28, 2023 that are offered self-service.
66% better price performance	Based on HPE net pricing and internal performance testing; compared to HPE 3PAR 8200 Storage
2.3x faster performance	Based on HPE internal testing; compared to HPE Primera 630A Storage
100% Data Availability Guarantee	"Uptime guarantees that deliver," 2024
40% cost savings	Based on internal use case analysis, HPE Alletra Storage MP reduces total cost of ownership (TCO) versus non-disaggregated architectures by allowing organizations to avoid over-provisioning.
45% energy reduction	Based on internal analysis comparing power consumption, cooling requirements, and energy efficiency when transitioning from spinning disk to HPE Alletra Storage MP's all-flash architecture.
10x faster trouble shooting with HPE AIOps	Based on HPE internal analysis; compared to native storage device management tools and legacy monitoring and reporting framework capabilities.
HPE Storage Future-Ready Program	Substantiation
Customers can expect an average of 30% savings in total cost of storage ownership (TCO) by avoiding one forklift upgrade	Based on average HPE net pricing across multiple solution configurations, April 2024
HPE Alletra Storage MP X10000	Substantiation
Up to 6x faster than two of the leading vendors delivering object storage	Based on internal testing and analysis of publicly available data as of November 2024
As much as 2x or more improved performance in terms of throughput, latency, and performance consistency	Based on internal testing of RDMA for S3-compatible storage performed by HPE
80% lower latency compared to traditional S3, and an 80% reduction in latency variability	As measured by the P99 latency metric during internal testing performed by HPE

HPE Alletra Storage MP X10000	Substantiation
Free up as much as 95% of the host (storage client) server's CPU resources	As measured during internal testing performed by HPE. Based on how RDMA for S3-compatible storage enables offloading of network packet processing
80% performance improvement with RDMA for S3-compatible storage	Adapted the widely recognized MLPerf™ storage benchmark. Result is based on internal testing performed by HPE to evaluate RDMA S3-compatible object storage versus traditional TCP-based performance
Up to 1.2 PB/hour aggregate throughput	Calculated based on the X10000 with 10 data protection accelerator nodes, each delivering up to 300 TB/hour data protection storage throughput
World's fastest enterprise backup storage (1.2PB/hr)	Based on HPE's analysis of publicly available performance and benchmark data for purpose-built data protection appliances as of July 2025. Performance results are based on internal HPE testing of a 4-node data protection accelerator configuration with a 3-node, 1-JBOF HPE Alletra Storage MP X10000 cluster. Actual performance may vary based on workload, deduplication ratio, backup software, and deployment environment.
Up to 60:1 data reduction	Raw capacity is the installed capacity of media used to store backup data. The usable capacity is the available physical capacity after protection. The effective capacity is the logical capacity as a result of the HPE Catalyst-powered data reduction space saving provided by the data protection accelerator node for the X10000. A ratio of 60:1 is used between the effective capacity and the usable capacity to indicate the space saving that can be achieved, but does not represent a guarantee. Your data reduction results may vary based on data type, workload, and retention policies.
Up to 98% less storage and network traffic	By reducing data at the source before it travels across the network, the data protection node for the X10000 (powered by HPE Catalyst) minimizes bandwidth requirements and maximizes storage efficiency, with reported reductions of up to 98%.

Primary claims for HPE Alletra and Data Services Cloud Console	Substantiation
99% operational time savings—100x faster provisioning	Comparison of infrastructure lifecycle management of HPE Alletra versus ESG Market Research, April 2021
40% IT resource savings	A commissioned study conducted by Forrester Consulting, The Total Economic Impact of GreenLake , May 2022

Supporting claims for HPE Alletra and Data Services Cloud Console	Substantiation
93% of IT decision-makers seeing storage and data management complexity impeding digital transformation	ESG Data Management Survey, April 2021, commissioned by HPE
82% of IT decision-makers seeing storage management at scale as a key challenge	ESG Data Management Survey, April 2021, commissioned by HPE
88% of IT decision-makers looking to bring cloud-native apps on-premises	ESG Data Management Survey, April 2021, commissioned by HPE

Primary claim for HPE Alletra dHCI and HPE SimpliVity	Substantiation
HPE Alletra dHCI is the industry’s only disaggregated HCI powered by artificial intelligence	Note this claim is subjective. The following is the evidence and/or reasoning that supports our view, as well as the internal research and external opinion that demonstrate the point of view. HPE Solution Brief , 2024.
HPE Alletra dHCI is made to do more than other traditional HCI and delivers a better HCI experience without any of the tradeoffs providing 10x faster application performance, 4x more reliability for business-critical applications, and 5x more efficient for better economics	Based on HPE internal testing and comparing Dell EMC VxRail versus HPE Alletra dHCI with 100 TB effective capacity, ability to withstand a minimum of two drive failures, and triple mirroring.
HPE Alletra dHCI works for any virtual machine	HPE Alletra dHCI does not have technical restrictions on the virtual machine it can support. HPE Nimble Storage QuickSpecs , HPE Alletra dHCI QuickSpecs .
Apps and data can move freely across all clouds	HPE Cloud Volumes enables bidirectional data mobility between HPE Alletra dHCI and the public cloud. HPE does not charge any egress fees when restoring data from HPE Cloud Volumes on-premises. HPE Cloud Volumes customers can also leverage Amazon Web Services, Google Cloud Platform™, and Microsoft Azure simultaneously without any lock-in.
HPE SimpliVity delivers 99.999% data availability	Based on measured uptime of HPE SimpliVity installed base over the past four quarters starting in February 2023 for software-optimized models. Assumes customer follows HPE best practices with a minimum of a two-node high availability cluster pair of HPE SimpliVity hosts and using an active version of HPE OmniStack software and an active version of the support pack firmware bundle.
Supporting claims for HPE InfoSight (for HPE Alletra, and HPE SimpliVity)	Substantiation
1250 trillion data points collected by HPE InfoSight	Based on the number of data points collected and processed since 2011 from HPE Nimble Storage and Storage arrays.
Savings of over 1.5 million hours of lost productivity due to downtime	Based on the volume of critical issues proactively resolved for customers. Analyst White Paper by ESG: HPE Alletra Storage 6000 QuickSpecs , September 2024.
86% issues automatically opened and resolved	HPE Business White Paper: Based on HPE Storage’s Installed Base, August 2021.
99.9999% guaranteed availability	Brochure: “ Uptime guarantees that deliver ,” 2024.
No Level 1 or 2 support; Level 3 response in < 1 minute on average	Analyst White Paper by ESG: HPE Alletra Storage 6000 QuickSpecs , September 2024.
<ul style="list-style-type: none"> — Pinpoint issues between storage and VMs and underutilized virtual resources without effort. — Take the guesswork out of managing data infrastructure with AI-driven recommendations that improves performance, drives higher availability, and optimizes resource utilization and planning. 	Analyst White Paper by ESG: HPE Alletra Storage 6000 QuickSpecs , September 2024.

Primary claims for GreenLake for File Storage	Substantiation
80x faster than legacy NAS for read operations	Meet Your Need for Speed with NFS blog , October 2021, by VAST Data. The FIO benchmark test showed 174 GB/sec, and a NAS NFS client delivers 2 GB/sec. GreenLake for File Storage is built on VAST Data software and the HPE Alletra Storage MP B10000 hardware platform, which has RDMA for fast performance and can scale beyond 200 GB/sec of read performance.
100s of GB/sec of throughput and beyond for read performance	The per enclosure performance has been characterized and certified, and it is part of the configuration and sizing tools for GreenLake for File Storage, which achieves 100s of GB/sec by scaling data and compute enclosures.
Designed for 99.9999% availability	GreenLake for File Storage is built on the HPE Alletra Storage MP B10000 hardware platform and is fully redundant with no single point of failure. Hardware expansion and software upgrades do not cause interruption of connectivity to file shares. The six 9s metric for VAST Data software is substantiated by the “Ensuring Storage Reliability at Scale” white paper, February 2022.
Data reduction: Enterprise backup files 20:1; quantitative trading market data 8:1; log stores 4:1; Splunk 3.5:1; AI/ML training data, VFX and animation data, and backup target 3:1; seismic and weather data 2.5:1; life science data and multi-tenant HPC environments 2:1	These ratios are measured results from hundreds of VAST Data customer data sets. The ratios are documented in “The VAST Data Platform” electronic white paper in the “Similarity Reduction in Practice” section, which is current as of May 2024, and on the “Similarity Reduction: Report From the Field” webpage under “The Tale of the Tape”. Data reduction is a software feature with no dependencies on HPE Alletra Storage MP B10000 hardware.

TCO savings for HPE virtualization capability for HPE Private Cloud

Claim	Substantiation
25%–40% savings on virtualization license costs	Based on analysis comparing primary virtualization license requirements for HPE Alletra dHCI and HPE SimpliVity to traditional HCI competitor products, April 2024
50% reduction in virtualization costs	Based on HPE internal analysis comparing pricing of virtualization market leader offerings to expected HPE virtualization capability pricing, April 2024
50% cost reduction by leveraging HPE CloudPhysics to drive server consolidation	Inspecting HPE CloudPhysics customer data set and right-size the VM environment
Total Savings up to 80% equating to competitive solutions being 5x more expensive	

Claim	Substantiation
Assess VM utilization through HPE CloudPhysics and consolidate VMs	Up to 50%
HPE CloudPhysics	<p>According to HPE CloudPhysics customer data set of ~8,500;</p> <ul style="list-style-type: none"> — 50% own more licenses than they currently use/need — Of those customers, the license over-provisioned rate averages more than 50% — 12% use less than 25% of their licenses — 23% use less than 50% of their licenses — 39% use 75% or less <p>So, we can safely say that by inspecting and optimizing the VM environment with CP, this can save up to 50% in license cost.</p>
Reduce on Virtualization costs	Pricing will be at least 50% lower than VMware®
HPE's virtualization capability	Licensing costs will be significantly lower than comparable alternative virtualization software
Adopt optimized HPE Private Cloud solutions to minimize VMware license requirements	25%–40% Savings*
HPE Private Cloud Business Edition with HPE Alletra dHCI	<p>Better economics (fewer virtualization licenses) due to disaggregation of compute and storage</p> <ul style="list-style-type: none"> — With dHCI all CPU resources are used for running workloads unlike HCI offerings (requires Controller VM) — Dedicated storage eliminates hypervisor license costs for controller VM overhead — 78% more usable compute resources on HPE Alletra dHCI when compared to traditional hyperconverged
HPE Private Cloud Business Edition with HPE SimpliVity	<p>Lower TCO driven by fewer cores requiring fewer licenses to achieve same resiliency</p> <ul style="list-style-type: none"> — Achieves FTT=2 with 2 nodes (vs. 6 for competition) <p>Additional value add: in-built data protection with Hyper Efficiency (vs. competition needing external backup solutions)</p>

* Based on HPE internal testing, April 2024

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