HPE MSA Gen7 Storage

High performance shared storage for today's SMB

Hybrid-flash and all-flash storage systems that provide an affordable path to high performance application acceleration for demanding SMB workloads

A balanced approach to server storage

Just like today's enterprise IT users, small and medium-sized businesses (SMBs) must constantly juggle the trade-offs among budget, performance, and simplicity within their IT portfolio.

Budgets are either flat or declining, driving businesses to do more with less. Both IT and human resources are impacted, which requires significant boosts in performance and automation to keep up with demands. At the same time, their IT infrastructure must constantly evolve and grow to take advantage of market opportunities.

The HPE MSA portfolio of hybrid and all-flash storage solutions provides the key IT infrastructure, which is required to balance these trade-offs. Now, in its seventh generation, the HPE MSA Storage portfolio remains one of the leading entry-level shared storage solutions for HPE servers for almost three decades.

The HPE MSA Gen7 Storage portfolio provides three key advantages for customers looking to deploy entry-level shared storage, including:

- Proven simplicity—Shared storage anyone can use
- Application acceleration—Real performance you can see and feel
- Affordability—A great value whether you start small or scale up

HPE GreenLake

HPE MSA Gen7 Storage is a performance-optimized entry point for shared storage supported on HPE ProLiant servers. HPE MSA Gen7 Storage offers a portfolio of arrays, drives, and options that deliver a common set of features, including:

- **Dual-controller, two-pool, active-active design architecture:** Delivers the resiliency, application availability, and uptime required for shared storage
- **Custom-designed RAID acceleration ASIC and controller design:** Up to 2x performance improvement compared to HPE MSA Gen6 Storage, lowering system latency and improving user productivity[1]
- **12 Gb SAS midplane:** End-to-end high performance communication between the controller and all connected media
- **Wide range of SFF/LFF media options:** Includes high-capacity hard disk drive (HDD) and solid-state drive (SSD) media options, enabling users to scale beyond 7 PB of raw storage capacity
- **Expand storage capacity with a choice of SFF and LFF drive enclosure options:** Grow-as-you-go capacity expansion helps ensure a long and useful life for your storage array
- **Self-encrypting drive (SED) options for SSD and HDD media:** Adds a layer of security to protect against data theft
- **HPE MSA-DP+ data protection:** High performance RAID technology that significantly improves performance, availability, and rebuild times compared to traditional RAID types
- **HPE MSA Advanced Data Services:** Optional license supported on all HPE MSA Gen7 Storage arrays (included with the HPE MSA 2072 Storage array) that provides access to automated data tiering, remote snap replication, and additional snapshots
- **HPE MSA Health Check:** Analyze the health of your HPE MSA system using the Storage Management Utility (SMU) or through HPE cloud-based tool free of charge
- **Online firmware updates:** Nondisruptive, online firmware updates for both controllers and storage media that simplify routine system maintenance

[1] Based on HPE internal performance testing, 2024

Transition to affordable shared storage

Pick your point of entry

Start with the HPE MSA 2070, a flash-ready and hybrid-capable storage array that allows for extensive customization choices. Design and build a unique storage system with the largest number of configuration options available on any HPE MSA offering. Configure for high capacity or start small and scale as needed with any combination of SAS SSDs, enterprise SAS HDDs, and/or lower-cost midline SAS HDDs. The HPE MSA 2070 also offers multiple TAA-compliant array options, as well as support for self-encrypting drive (SED) media for added data protection capabilities.

The HPE MSA 2072 Storage is a flash-enabled and hybrid-capable storage array that includes two factory-integrated high performance 1.92 TB SSD drives and the HPE MSA Advanced Data Services (ADS) license. Use the HPE MSA Advanced Data Services license to design and build a hybrid storage array with hands-free, real-time automated tiering that persistently moves data between high performance and archive storage tiers. HPE MSA hybrid-flash storage systems allow users to cost-effectively optimize the use of storage capacity while boosting performance with a minimal investment in flash media.

The HPE MSA 2070 Flash Bundle is an all-flash, shared storage system that is configured to support the most demanding applications that require intense read and write capabilities. All HPE MSA flash bundle models include 12 factory-integrated high performance SSDs, providing initial raw capacity points of 23 TB or 46 TB with the option to extend capacity, anytime, with HPE SSD 6-pack drive bundles. Easily serve applications that demand high performance with a system capable of delivering up to 2x more input/output operations per second (IOPS) performance than HPE MSA Gen6 Storage and is one of the fastest entry-level arrays available today.[2]

Expand as your IT grows

With flexible, modular architecture that facilitates future growth, the HPE MSA Gen7 Storage portfolio supports LFF and SFF expansion drive enclosures to expand your storage capacity as needed. Up to nine expansion drive enclosures can be added to any HPE MSA Gen7 Storage base array model. Start small and scale as needed with any combination of SSDs, high performance enterprise SAS HDDs or lower-cost midline SAS HDDs. High-capacity HDD and SSD drive options support expansion beyond 7 PB of raw capacity for a single HPE MSA Gen7 Storage array.

Experience an immediate boost in performance

Built for speed

The Gen7 RAID acceleration ASIC and controller architecture increase system performance by as much as 2x as compared to HPE MSA Gen6 Storage.[3] This improvement in IOPS and throughput helps lower system latencies, enabling connected systems and users to experience better productivity.

Automated performance tiering

Utilizing automated tiering version 2 (v2) enhancements, HPE MSA Gen7 hybrid storage configurations will automatically respond to input/output (I/O) changes in real time to deliver up to 45% more workload application acceleration when compared to version 1 (v1) utilized on HPE MSA Gen5.[4] Automated tiering v2 operates at the pool level, is continuously on, and is initiated by adding more than one drive type to the pool.

[2], [3], [4] Based on HPE internal performance testing, 2024

Redefining RAID-based recovery for entry-level shared storage

HPE MSA-DP+ revolutionizes data storage and protection with its unique approach to spare drive usage and multidrive rebuilds, significantly speeding up recovery times. HPE MSA-DP+ supports many-to-many rebuilds with up to 25x faster rebuild performance versus RAID[5]. Traditional RAID also requires adding a minimum number of identical drives to expand capacity. With HPE MSA-DP+, you can expand capacity with just one drive that is up to twice the capacity of the others in the group.

HPE MSA Gen7 Storage

HPE MSA 2070 Storage systems

- Two controllers per array, four host ports per controller
- SFF and LFF base array models supporting 16 Gb FC, 10/25GbE iSCSI (SFP+), 1/10GBASE-T or 12 Gb SAS host connectivity
- Up to 2x higher IOPS[6] and 30% improved bandwidth[7] as compared to previous generation HPE MSA Gen6 Storage
- Scale beyond 7 PB of raw storage capacity by adding up to nine SFF or LFF drive enclosures
- Support for SED media options
- TAA-compliant storage array options

HPE MSA 2072 Storage systems

- HPE MSA 2070 SFF base array models supporting 16 Gb FC, 10/25GbE iSCSI (SFP+), 1/10GBASE-T or 12 Gb SAS host connectivity
- Hybrid-flash ready with two factory-integrated 1.92 TB read-intensive SSDs
- HPE MSA Advanced Data Services license included to provide real-time automated data tiering

HPE MSA 2070 Flash Bundle Storage systems

- HPE MSA 2070 SFF base array models supporting 16 Gb FC and 10/25GbE iSCSI host connectivity
- All-flash array with 12 factory-integrated read-intensive SSDs offering either 23 TB or 46 TB of initial raw storage capacity
- Upgrade storage capacity with cost-effective HPE MSA SSD 6-pack media bundle options

[5] Based on HPE internal performance testing, 2024

[6] Based on HPE internal performance testing of random reads IOPS, 2024

[7] Based on HPE internal performance testing of segmented sequential writes, 2024

Remove complexity from your storage infrastructure

Intuitive user interface—No manuals needed

The HPE MSA Storage Management Utility (SMU) supports system configuration with step-by-step guided workflows that help eliminate errors and dramatically improve the user experience.

Simplified dashboard offers at-a-glance storage management

The HPE MSA SMU dashboard provides at-a-glance views so that users can quickly access important system information including alerts, capacity, performance, and activity.

Avoid downtime with a few simple steps

The HPE MSA Health Check tool simplifies the tasks required to routinely check the health of your HPE MSA Storage system. HPE MSA Health Check analyzes performance and configuration data against a set of HPE best practices while also checking system health and firmware levels. Once completed, the HPE MSA Health Check tool generates a report detailing your system's health and adherence to all best practices and known failure signatures. The report also provides detailed next-step guidance on solving any issues. HPE MSA Health Check use is available free of charge to all HPE MSA customers and can be accessed directly through the SMU or through the cloud-based tool on HPE.com. HPE MSA Gen7 Storage also supports online firmware upgrades for both system controllers and media. Online updates allow for nondisruptive maintenance to be performed, routinely, without having to shut down system resources.

HPE ProLiant and HPE MSA—Better together

HPE MSA and HPE ProLiant have been delivering better together solutions since 1996. A key to this relationship is integration testing from HPE. HPE engineers test a wide array of HPE ProLiant NICs and HBAs across many generations to validate interoperability between HPE ProLiant and HPE MSA. This provides the confidence you need before purchasing an HPE MSA Storage system and a better support experience after. HPE's commitment to interoperability between HPE ProLiant servers and HPE MSA Storage is well documented in our publicly accessible Single Point of Connectivity Knowledge (SPOCK) tool available on HPE.com.

Learn more at

HPE.com/storage/msa

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