HP MSA 2040 Storage

The latest MSA array features two high-performance controllers with support for the industry's latest Fibre Channel, iSCSI and SAS host interfaces. The MSA 2040 delivers mid-market features to entry SAN customers wanting to utilize the latest spinning or solid state drive technologies. Simple to deploy and simple to manage.

Changing storage requirements have raised the bar for entry shared storage arrays. The new MSA 2040 uniquely addresses HP ProLiant customers' shared storage and data protection needs, reducing total cost of ownership while dramatically increasing performance and availability utilizing technologies such as SSDs, Self-Encrypted Drives (SEDs), Snapshots, Volume Copy, and Remote Replication features.

The new HP MSA 2040 Storage arrays are positioned to provide an excellent value for customers needing increased performance to support initiatives such as consolidation and virtualization. The MSA 2040 delivers this performance by leveraging a new controller architecture with more processing resources, 4 GB cache per controller and four host ports per controller standard. The controller architecture delivers incredible performance and allows users to extract full benefits from the latest storage technologies such as SSDs.

The new MSA 2040 Storage ships standard with 64 Snapshots (upgradeable to 512) and Volume Copy software enabled for increased data protection and allows remote replication with optional Remote Snap software.

Product key benefits

Simple: Flexible architecture. Easy to setup. Easy to manage
- Choice of 8 Gb/16 Gb FC, 1GbE/10GbE iSCSI and 6 Gb/12 Gb SAS to match the configuration needs of your SAN infrastructure

- Deploy single or dual controllers depending on high-availability and budgetary requirements

- Select large or small form factor disk enclosures with choice of high-performance SSDs, SEDs, Enterprise-class SAS or SAS Midline drives based on application, performance, and budget need. Drives may be mixed in any enclosure.

- Integrated setup and management tools for MSA are easy to manage for ProLiant/BladeSystem IT managers

Fast: The MSA 2040 sets new standards for $/IOPS in entry SAN, 3X to 4X today's competition
- New high-performance controller architecture delivering up to 4X the performance of today's other entry-level SAN arrays

- New MSA 2040 4-port controller architecture with 4 GB cache supporting the latest FC, iSCSI & SAS interfaces translates into better application response time and the ability to support more virtualized workloads

- SSD support with integrated lifecycle management improves application performance and allows customers to reduce their operating costs by reducing foot prints and power consumption

Future proof: 2X the bandwidth and the first entry SAN with 16 Gb FC and now 12 Gb SAS
- Converged SAN Controller ports are upgradeable by SFPs to 8 Gb/16 Gb FC, and/or 1GbE/10GbE iSCSI. The MSA 2040 SAS controller supports 6 Gb or 12 Gb SAS facilitating ultra-high performance with or without required dedicated SAN infrastructure

- 4th generation of MSA's unique Data-in-Place upgrades provides unmatched investment protection

For more information on MSA software, visit **hp.com/go/MSA**

MSA Data Services Software

HP MSA Snapshot Software
HP MSA Snapshot Software enables increased data protection by creating recovery points for your data, taking a "picture" of your data at a specific point in time. Snapshots are then maintained even as data continues to change. In the event of a failure, you can recover data to any previous Snapshot. Snapshots are a great complement to tape or disk backup strategy. Functionality is controller-based so no host resources are used, and they are space-efficient and provide copy-on-write capability. The MSA 2040 ships standard with 64 Snapshots enabled. An optional 512 Snapshot Software License is available.

HP Volume Copy Software
HP MSA Volume Copy Software makes a physical copy of the data to another set of disks within the same array. One of the benefits of Snapshot and Volume Copy software is the ability to mount a Snap or Volume Copy to another server for backup, application testing, or data mining. HP Volume Copy Software is controller based, meaning no host resources are used. It provides a physical copy of data from one LUN to another with no server performance impact. The MSA 2040 arrays ship standard with Volume Copy.

HP MSA Array Remote Snap Software
Built on asynchronous replication technology that provides remote replication on the HP MSA 2040 and HP P2000 Arrays (FC, Combo FC/iSCSI, or iSCSI models), this optional software is based on MSA's Snapshot technology. It supports both Ethernet (iSCSI) and FC interconnects and provides flexible remote data protection options to your application environments. Protect your investment with Snapshot-based replication that enables local and remote recovery.

Technical specifications

HP MSA 2040 Storage

Drive description	Up to 199 SFF SAS/MDL SAS/SSD/SED or 96 LFF SAS/MDL SAS/SED Maximum including base array and expansion, depending on model
Drive type	Please refer to QuickSpecs for detailed info: http://h18004.www1.hp.com/products/quickspecs/14603_div/14603_div.pdf
Capacity	Supported 384 TB maximum including expansion, depending on model
Storage expansion options	HP MSA 2040 3.5-inch LFF disk enclosure or D2700 2.5-inch SFF disk enclosure MSA 2040 supports up to 7 disk enclosures
Storage host interface	4-Port SAN Controller: 8 Gb/16 Gb Fibre Channel and/or 1GbE/10GbE iSCSI 4-Port SAS Controller: 6 Gb/12 Gb SAS (autoswitching)
Storage controllers	MSA 2040 SAN Controller MSA 2040 SAS Controller
SAN backup support	Yes
Storage mirroring support	Yes
Systems Insight Manager support	Yes
Compatible operating systems	Microsoft® Windows® Server 2012 Microsoft Windows 2008 Microsoft Windows Hyper-V HP-UX Red Hat® Linux SUSE Linux VMware ESXi 5.x Detailed information available at: hp.com/storage/spock
Clustering support	Windows, Linux, HP-UX
Form factor	2U base array, 2U LFF or SFF disk enclosures
Warranty (parts-labor-onsite)	3-0-0

HP Factory Express

HP Factory Express provides customization and deployment services along with your storage and server purchases. You can customize hardware to your exact specifications in the factory—helping speed deployment. hp.com/go/factoryexpress

Customer Technical Training

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Resources

QuickSpecs

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Choose from a rich portfolio of services to make the most of HP Storage, so you can move with confidence to take full advantage of the broadest, most advanced portfolio in the industry.

Discover, plan, and design—understand your options and build it right from day one:

• HP Storage Efficiency Analysis

• HP Storage Impact Analysis

• HP Storage Modernization Service

• HP Storage Cloud Design Service

Deploy and integrate—increase uptime and decrease risk as you free up your resources:

• HP MSA Family Disk Array Installation and Startup Service

• HP Storage Data Migration Services

• HP Storage and Data Consultant Residency Service

• HP Proactive Select

Operate and support—meet service level agreements (SLAs) with the right support level. Choose from three levels of operate and support care:

• Optimized Care—delivers the highest levels of performance and stability through deployment and proactive management practices
HP Proactive Care 24x7—Plus, 20 credits per year
Additional options: HP Proactive Care Personalized Support (once per each new Proactive Care support environment), HP Personalized Support Additional Day, and an additional 10 HP Proactive Select credits per year

• Standard Care—maintains high level of uptime, along with expert help to cut the cost and complexity of implementation and support:
HP Proactive Care 24x7—Plus, 10 credits per year
Additional options: HP Proactive Care Personalized Support (once per each new Proactive Care support environment), HP Personalized Support Additional Day, and an additional 10 HP Proactive Select credits per year

• Basic Care—minimum recommended support
Support Plus 24—Plus, 10 credits per year
Additional options: 10 Proactive Select credits per year

If none of our support recommendations meet your needs, we can tailor a service solution for your unique support requirements. Only HP brings together deep expertise, proactive and business critical support and a strong partner network—plus, a full set of infrastructure services designed to power a converged infrastructure.

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