



# HPE MSA 2050 Storage

**HPE MSA Storage** has been the industry leading entry fibre channel SAN platform for the past eight years<sup>1</sup> with over 500,000 storage systems sold worldwide. **Hewlett Packard Enterprise** now introduces the fifth generation HPE MSA platform with HPE MSA 2050 Storage system that provides 2X more performance than the previous generation at the same price.<sup>2</sup> HPE MSA 2050 performs in excess of 200,000 IOPS starting at under \$10K for affordable application acceleration. However, do not let the simplicity and low cost fool you.

**HPE MSA 2050 Storage system** keeps your business running with expanded data protection features. New virtualized snapshot technology makes data protection and instant recovery a snap. Remote replication with Fibre Channel (FC) or iSCSI supports affordable disaster recovery.

HPE MSA 2050 allows you to grow flexibly now and into the future. Customers can start small and scale as needed with any combination of SSD, Enterprise, or Midline SAS drives.

The latest HPE MSA array features two high-performance controllers with support for entry storage's most popular FC, iSCSI and SAS host interfaces. HPE MSA 2050 delivers midmarket features to entry SAN customers wanting to utilize the latest hybrid flash technologies. HPE MSA 2050 is simple to deploy and simple to manage.

## Key features and benefits

### Accelerates applications affordable

- HPE MSA 2050 performs at over 200,000 IOPS starting at under \$10K for affordable application acceleration.
- Flexible base model delivers 2X more performance than the previous generation HPE MSA 2040 for the same price.

### No experience required

- HPE MSA 2050 is easy to install, easy to use, easy to maintain—no storage expertise necessary.
- Automated tiering dynamically responds to workload changes, so you don't have to.

### Keep your business running with expanded data protection features

- New virtualized snapshot technology makes data protection and instant recovery a snap.
- Remote replication with FC and iSCSI supports affordable disaster recovery.

### Grow flexibly now and into the future

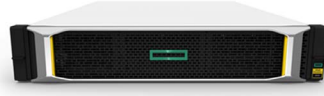
- Data-in-place upgrades protect drive investments and mitigate risky data migrations.
- Customers can start small and scale as needed with any combination of SSD, Enterprise, or Midline SAS drives.

<sup>1</sup> IDC WW Quarterly Enterprise Storage Systems Tracker, 4Q16, based on vendor revenues.

<sup>2</sup> Based on HPE internal study, MSA 2050 flexible base model delivers 2x more performance than previous generation for the same price, May 2017.



## Technical specification



### HPE MSA 2050 Storage

<b>Drive description</b>	Up to 192 SFF SSD/SAS/MDL SAS or 96 LFF SSD/SAS/MDL SAS maximum including base array and expansion, depending on model
<b>Max. drive type</b>	10 TB 12G 7.2K LFF dual-port MDL SAS HDD 1.8 TB 12G 10K SFF dual-port SAS HDD 2 TB 12G 7.2K SFF dual-port MDL SAS HDD 3.2 TB SFF SSD
<b>Max. raw capacity</b>	614 TB SFF/960 TB LFF Including expansion, depending on model
<b>Storage expansion options</b>	HPE MSA 2050 LFF Disk Enclosure HPE MSA 2050 SFF Disk Enclosure HPE MSA 2050 SAS DC Power Carrier Grade SFF Disk Enclosure
<b>Host interface options</b>	8 Gb/16 Gb FC 8 ports per system or 1GbE/10GbE iSCSI 8 ports per system 8Gb SAS 8 ports per system
<b>Storage controllers</b>	2 controllers per system included
<b>SAN backup support</b>	Yes
<b>RAID levels</b>	1, 5, 6, 10
<b>HPE Systems Insight Manager support</b>	Yes
<b>Compatible operating systems</b>	Microsoft® Windows Server® 2016 Microsoft Windows Server 2012 VMware® HP-UX Red Hat® Enterprise Linux® SUSE Linux Detailed information available at <a href="http://hpe.com/storage/spock">hpe.com/storage/spock</a>
<b>Clustering support</b>	Windows®, Linux, HP-UX
<b>Form factor</b>	2U base array, 2U LFF or SFF disk enclosures
<b>Warranty (parts/labor/on-site)</b>	3/0/0
<b>Warranty and included services</b>	3-year parts only next business day, no labor or on-site support



## HPE MSA software and data services

### HPE MSA Performance Automated Tiering

HPE MSA Performance Automated Tiering engine moves data between available tiers based on the access characteristics of that data. Frequently accessed pages migrates to the highest available tier delivering improved I/Os to the application. Another feature of HPE MSA tiering engine is Archive Tiering where cold or less frequently accessed data can be moved to lower performance tiers. Pages are migrated between tiers automatically to enhance performance, and reduce operational expenses.

HPE MSA Performance Automated Tiering functionality can be obtained with the optional HPE MSA Advanced Data Services LTU.

### HPE MSA Snapshot Software

HPE MSA Snapshot Software enables increased data protection by creating recovery points for your data, taking a picture of what your data was at the time of the snapshot. The 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.

A 64-snapshot license is included with all HPE MSA 2050 models. A total of 512 snapshots can be supported on HPE MSA 2050 with the purchase of the optional HPE MSA Advanced Data Services LTU.

### HPE MSA Volume Copy Software

HPE 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 HPE MSA 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. HPE MSA 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.

### HPE MSA Remote Snap Software

HPE MSA Remote Snap Software is storage based asynchronous replication technology that provides both local and remote replication on HPE MSA 2050 arrays. HPE Remote Snap functionality is based on existing Snapshot technology. Supporting both Ethernet (iSCSI) and FC interconnects provides flexible options to your application environments.

HPE MSA Remote Snap functionality can be obtained with the purchase of the optional HPE MSA Advanced Data Services LTU.

### HPE StoreEasy Gateway Storage

An HPE StoreEasy 3000 Gateway Storage can add file, print, iSCSI, and manage hosting services to an HPE MSA 2050 array. For more information, visit [hpe.com/storage/storeeasy](http://hpe.com/storage/storeeasy).

### HPE MSA Advanced Data Services Suite

The optional HPE MSA Advanced Data Services Suite includes the following software titles:

- HPE MSA Performance Automated Tiering LTU
- HPE MSA 512-Snapshot Software LTU
- HPE MSA Remote Snap Software LTU

This optional software suite licenses all software functionality on HPE MSA 2050.



## Resources

### QuickSpecs

#### [HPE MSA 2050 Storage](#)

### HPE Factory Express

HPE Factory Express offers configuration, customization, integration, and deployment services for HPE servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped, and deployed.

HPE Factory Express offers service packages for simple configuration, racking, installation, complex configuration, and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HPE products supported through HPE Factory Express include a wide array of servers and storage: HPE Integrity, HPE ProLiant, HPE Apollo, HPE ProLiant Server Blades, HPE BladeSystem, HPE 9000 servers, as well as the HPE MSA family of storage systems.

### Customer Technical Training

The job responsibility of a storage administrator has evolved to one that needs to adapt to changes quickly. Companies need the right people with the right skills and expertise to manage immense volumes of data, making certain their teams maintain high levels of staff motivation and productivity. They should be able to view and manage storage ecosystems holistically and operate all components together—from services, applications, devices, and infrastructure.

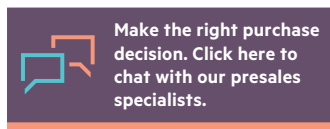
### HPE Financial Services

Optimize your IT investment strategy with new ways to acquire, pay for, and use technology, in lock-step with your business and transformation goals. [hpe.com/solutions/hpefinancialservices](http://hpe.com/solutions/hpefinancialservices)

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## HPE Pointnext

**HPE Pointnext** leverages our strength in infrastructure, partner ecosystems, and end-to-end lifecycle experience, to accelerate powerful, scalable IT solutions to provide you the assistance for faster time to value. HPE Pointnext provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation.

### Operational Services

#### • HPE Flexible Capacity

With **HPE Flexible Capacity**, you get the speed, scalability, and economics of the public cloud in the privacy of your data center. Gain the advantages of the public cloud—consumption-based payment and rapid scalability without worrying about capacity constraints. Reduce the heavy lifting needed to operate a data center. And retain the advantages that IT provides the business, such as control, security, and others. Deliver the right user experience, choose the right technology for the business, manage privacy and compliance, and manage the cost of IT. And, you have the option to use the public cloud when needed.

#### • HPE Datacenter Care Service

**HPE Datacenter Care** helps improve IT stability and security, increase the value of IT, and enable agility and innovation. It is a structured framework of repeatable, tested, and globally available services building blocks. You can deploy, operate, and evolve your data center wherever you are on your IT journey. With HPE Datacenter Care, you benefit from a personalized relationship with Hewlett Packard Enterprise via a single point of accountability for HPE and others' products.

#### • HPE Proactive Care Service

**HPE Proactive Care** gives customers an enhanced call experience. When your products are connected to Hewlett Packard Enterprise, we help you prevent problems and maintain IT stability by utilizing personalized proactive reports with recommendations and advice. This

service includes available response times of next business day, 4-hour response, or 6-hour to repair with answers to software questions within two hours. This service also includes collaborative software support for independent software vendors (ISVs), such as Red Hat, VMware, Microsoft, and others running on your HPE servers.

#### • HPE Foundation Care Service

**HPE Foundation Care** connects you to Hewlett Packard Enterprise 24x7 for assistance on resolving issues. This service includes available response times of next business day, 4-hour response, or 6-hour to repair with answers to software questions within two hours. Hewlett Packard Enterprise is a leading manufacturer who makes this level of coverage available as a standard service offering for your valuable servers. In addition, collaborative software support is included and provides troubleshooting assistance on industry-leading software running on your server. Simplify your support experience and make Hewlett Packard Enterprise your first call to help resolve hardware or software problems.

#### Advisory and Transformation Services—

HPE Pointnext designs the transformation and builds a road map tuned to your unique challenges including Hybrid IT, Workload and Application Migration, Big Data, and the Intelligent Edge. Hewlett Packard Enterprise leverages proven architectures and blueprints, integrates HPE and partner products and solutions, and engages Professional and Operational Services teams from HPE Pointnext as needed.

**Professional Services**—HPE Pointnext creates and integrates configurations that get the most out of software and hardware, and works with your preferred technologies to deliver a more efficient solution. Services provided by the HPE Pointnext team, certified channel partners, or specialist delivery partners include installation and deployment services, mission-critical and technical services, and education services.

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