

Bring together the best of HPE Converged Storage

HPE StoreSystem

Converged—Do more with the best of block, file and disk-based backup

- Get Tier 1 primary storage at a midrange price
- Meet block and file storage needs as they arise
- Reduce your backup capacity requirements by up to 95 percent
- Increase consolidation opportunities with mixed workload support
- Double VM server density

Efficient—Spend less money on storage

- Cut capacity requirements in half with industry-leading thin technologies for file and block storage
- Optimize service levels and reduce costs with automated subvolume file and block tiering
- Decrease costs with federated deduplication, which optimizes where you deduplicate your backup data

Effortless—Spend less time managing storage

- Get up and running in minutes with HPE SmartStart and Rapid Provisioning
- Centrally manage both file and block storage on an ongoing basis
- Reconfigure storage in seconds without disruption
- Manage backup and DR operations from a single pane of glass



A forward-looking way to improve your storage infrastructure

You're hardly alone if your storage infrastructure is outdated. Legacy monolithic architectures that function as siloed data repositories are simply unable to handle today's unpredictable growth rates and workload performance demands. You need to harness information more easily, and tap into it more readily, to enhance your competitive edge.

Hewlett Packard Enterprise can help steer you in the right direction. HPE StoreSystem is a storage solution, designed for small- and medium-sized businesses, that combines primary block and file storage with a disk-based backup system. This all-in-one storage solution, shipped pre-racked from the factory, delivers immediate, proven benefits.

Enterprise storage capabilities at a price you can afford

HPE StoreSystem provides a top-quality HPE Converged Storage solution for your primary and secondary storage. It includes everything you need to get up and running quickly and easily with your primary storage—including HPE 3PAR Thin Technologies, which sets the standard for storage efficiency. It also includes software suites that offer data optimization, replication, security, reporting, and VMware® application integration—making enterprise Tier 1 features available at a midrange price.

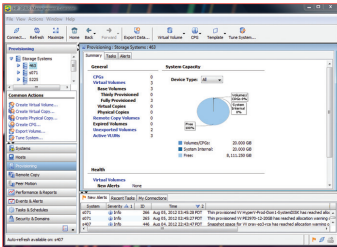
With HPE StoreSystem, you can:

- Cut application disk capacity requirements by up to 50 percent¹
- Double virtual machine (VM) density on servers²
- Reduce disk-based backup capacity requirements by up to 95 percent³

¹ As compared to your legacy storage array. See the HPE Get Thin Guarantee for more details: hp.com/storage/getthin.

² As compared to your legacy storage array. See HPE Get Virtual Guarantee for more details: hp.com/storage/getvirtual program.

³ Based on 20:1 deduplication ratio.



HPE StoreSystem: everything you need to store and protect your data

HPE StoreSystem brings together HPE 3PAR StoreServ Storage, HPE StoreOnce Backup, and all the array-based software you need for a complete HPE Converged Storage system. The key components of HPE StoreSystem include:

HPE 3PAR StoreServ 7200 Storage: resilient Tier 1 storage at a midrange price

HPE 3PAR StoreServ 7200 Storage delivers the same industry-leading architecture chosen by three out of four of the world's largest service providers. It's easy-to-deploy, affordable, and scalable, and it lets you start small and grow without disruption. Designed to meet fluctuating and mixed workload demands, HPE 3PAR StoreServ 7200 Storage provides the performance required to double virtual machine (VM) density on your physical servers. You can store all of your data on a single system that supports advanced features, including storage federation and automated tiering.

HPE 3PAR StoreServ 7200 Storage meets your current block and file storage needs, while reducing capacity requirements by 50 percent* through HPE's leading thin technologies, which combine both hardware and software innovations. The underlying 3PAR StoreServ architecture supports virtualization and simplifies storage to handle rapid data growth. Plus, you'll be able to meet mixed workload demands with virtually unlimited scalability options. It's storage that offers the performance and flexibility you need to effortlessly accelerate new application deployment and support server virtualization, the cloud, ITaaS, or anything else your future may hold.

HPE 3PAR Software: simplified management and increased utilization

HPE 3PAR Software, which includes extensive suites with advanced capabilities, is included with StoreSystem. The suites

offer thin provisioning, data optimization, replication, security, reporting, and application integration—delivering enterprise Tier 1 features to midrange customers. These suites include:

- **The HPE 3PAR Operating System Suite** includes everything you need to get started, including a collection of advanced internal virtualization capabilities that increases storage efficiency and reduces administration time. HPE 3PAR Thin Technologies capabilities set the gold standard for storage efficiency. The suite's management software features are designed to get you up and running quickly, simplify management, and make upgrades effortless.
- **The HPE 3PAR 7000 Data Optimization Software Suite** is specifically designed for environments with constantly changing storage requirements. Policy-driven, autonomic storage tiering technologies increase efficiency by balancing cost and performance to meet service-level requirements, while increasing business agility and mitigating risk. This suite also allows you to redistribute and refresh your storage nondisruptively, thus simplifying management and problem-solving.
- **The HPE 3PAR Replication Software Suite** allows you to dramatically reduce the cost of remote data replication and disaster recovery (DR) with highly efficient, multimode replication across all HPE 3PAR StoreServ models. Effortless resilience is delivered by HPE 3PAR Peer Persistence software, which keeps your business-critical VMware deployment seamlessly running on your HPE 3PAR StoreServ 7200 system, even in the event of disaster.
- **The HPE 3PAR Security Software Suite** provides secure access and the ability to provision virtual private array storage software services. At the same time, you get an efficient and cost-effective way to meet compliance standards, such as data retention requirements from internal governance policies or eDiscovery.

- The HPE 3PAR Application Software Suite for VMware offers powerful components to deliver proven virtualization solutions from the desktop to the data center and into the cloud. This suite includes everything you need to deliver bulletproof data protection and effortless storage management in your VMware environment.
- The HPE 3PAR 7000 Reporting Software Suite delivers Web-based historical performance and capacity management reporting for one or more HPE 3PAR StoreServ Storage systems, even if they are geographically dispersed.

HPE 3PAR StoreServ File Services: seamless provisioning

HPE 3PAR StoreServ File Services offers a tightly integrated and efficient converged solution that allows you to provision file shares and block volumes from a single user interface via native SMI-S capability on HPE 3PAR StoreServ Storage. HPE 3PAR StoreServ File Services provides efficient, secure, and highly available file services that can support thousands of concurrent users and multiple workloads. With combined deduplication and thin-provisioning capabilities, HPE 3PAR StoreServ File Services leverages HPE 3PAR Thin Technologies to autonomically reclaim unused capacity on the array.

HPE StoreOnce 4220 Backup: insurance for your data

The HPE StoreOnce Backup system, based on the HPE StoreOnce deduplication technology developed by Hewlett Packard Labs, reduces the amount of backup data you need to store. Using a single deduplication algorithm, HPE StoreOnce 4220 Backup works across your enterprise's data protection hardware and software platforms. It seamlessly integrates with your existing backup applications, enabling flexible integration in both SAN and virtualized environments.

With federated deduplication, you can move deduplicated data from remote sites to the main location or to a secondary DR site without rehydrating data along the way. The HPE StoreOnce Backup system lets you consolidate two management tools into one, allowing the backup application to manage backup, deduplication, and replication. This system can be tailored to the data protection needs of your business, which means you no longer need to worry about the product limitations of your backup vendors.

Seamless integration, with a range of configurations

HPE StoreOnce Backup systems are supported by HPE Data Protector software and all major backup applications, allowing seamless integration with existing infrastructures. This means that your SAN and virtualized environments can be configured the way you need them to be, without requiring any additional training or investment. HPE StoreOnce Backup systems also offer a range of targets for backup, including virtual tape library (VTL), NAS—common Internet file system (CIFS) or network file system (NFS)—and OpenStorage Technology (OST).

Technical specifications

HPE 3PAR StoreServ 7200

HPE 3PAR ASIC	Gen4
Controller nodes	2
Max. SFF drives	144
Max. LFF drives	120
Drive types (mixable)	SAS (performance, nearline, SSD)
Cache	24 GB
Max. 8 Gb/s FC ports	12 = 4 (built in) + 8 (optional)
Max. 10 Gb/s iSCSI/FCoE*	4 (optional)
Built-in IP remote copy ports (can also use FC ports)	2
Controller enclosure	2U with 24 SFF drive slots
Drive enclosure (can be mixed behind one controller pair)	SFF drive enclosure: 24 slots in 2U LFF drive enclosure: 24 slots in 4U

HPE 3PAR StoreServ File Services

Drive description and type	(2) SFF SAS; per node, included, for OS mirror only
Maximum capacity	900 GB raw internal SAS, depending on model
Storage expansion options	Attach to HPE 3PAR StoreServ, StoreVirtual, MSA, EVA, and XP Storage
Compatible operating systems	Microsoft® Windows®, Linux®, UNIX®, VMware, Client OS
Availability	RAID protected drives for mirrored OS, redundant power and cooling
Management	StoreEasy Manager and SMI-S provider storage management, iLO 4
Number of users	100–25,000, depending on total number of StoreEasy 3000s

HPE StoreOnce 4220

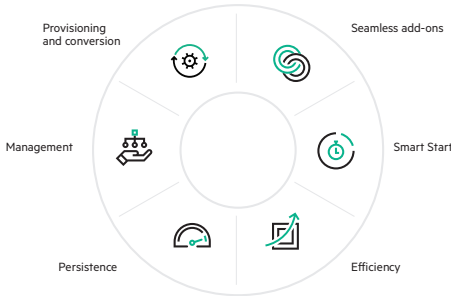
Drive description	12* LFF midline SAS. Can be increased to 24 drives by adding capacity upgrade (sold separately)
Drive type	1 TB 3G 7.2K LFF dual-port MDL SAS
Maximum capacity	Starts at 12 TB raw capacity (8 TB usable) and scales to 24 TB raw (18 TB usable)
Transfer rate	Up to 3.3 TB/hr with capacity upgrade
Deduplication	HPE StoreOnce deduplication
Storage expansion options	HPE StoreOnce hardware upgrade kits (ordered separately)
Host interface	2* 1GbE NAS, iSCSI, StoreOnce Catalyst ports
RAID support	RAID 6
Replication support	Low-bandwidth replication managed by either StoreOnce appliance for VTL/NAS or by backup software for StoreOnce Catalyst
Target for backup applications	HPE StoreOnce Catalyst, VTL (iSCSI, FC), and NAS (CIFS/NFS)
Tape devices emulated	HPE LTO-2/LTO-3/LTO-4/LTO-5 Ultrium Tape Drives in MSL2024 Tape Library, MSL4048 Tape Library, HPE D2D generic library with HPE D2D generic tape library
Number of VTLs and NAS targets	Up to 96
Maximum number of source appliances (replication fan-in)	24
Form factor	2U

* Future support

Software suites for HPE 3PAR StoreServ 7000 Storage

HPE 3PAR StoreServ 7000 Storage supports the same operating system and software offerings as the other members of the HPE 3PAR StoreServ family, but with these

specific 3PAR StoreServ models you have the opportunity to purchase software bundled into a series of suites designed to simplify purchasing and save you money. Selected software titles can also be purchased separately, as indicated below.



HPE 3PAR Operating System Software Suite Required for all new HPE 3PAR StoreServ 7000 systems, this foundational software suite gives you everything you need to get up and running quickly and efficiently. This suite includes the HPE 3PAR Operating System, Management Console, Host Explorer, and SmartStart—software designed to get you off to a quick start with your new HPE 3PAR StoreServ 7000 system. It also includes all of the platform’s thin software offerings—Thin Provisioning, Thin Conversion, and Thin Persistence. Other highlights of this suite include Full Copy, autonomic rebalancing capabilities that help you optimize the use of future capacity expansions, and support for standard multipathing software for high availability in clustered environments. A 180-day license for online import is included to enable migration from HPE EVA storage.

HPE 3PAR Replication Software Suite This optional suite bundles HPE 3PAR Virtual Copy with Remote Copy software, both also sold separately for all HPE 3PAR StoreServ 7000 models. Included in this bundle is Peer Persistence, which enables peer federation for VMware clusters to improve overall availability. Licensed based on system capacity.

HPE 3PAR Data Optimization Software Suite This optional software bundle combines HPE 3PAR Dynamic Optimization, Adaptive Optimization, and Peer Motion software, so you can move data and workloads between arrays without impacting applications, users, or services. Licensed based on system capacity, the three software titles bundled in this suite are also sold separately for all HPE 3PAR StoreServ 7000 models.

HPE 3PAR Security Software Suite This optional suite bundles HPE 3PAR Virtual Domains and Virtual Lock software, both also sold separately for all HPE 3PAR StoreServ 7000 models. With this suite, you can segregate access and deliver robust storage services for different applications and user groups with additional security attached to the retention of storage volumes. Licensed based on system capacity.

HPE 3PAR Application Software Suite for VMware Everything you need to make your VMware environment more agile and efficient—including HPE 3PAR Recovery Manager for VMware, Host Explorer for VMware, VASA support, and three essential plug-ins: the VMware Site Replication Manager (SRM) Adapter, the HPE 3PAR VAAI plug-in, and the 3PAR management plug-in for VMware View®. This suite is optional and licensed on a per-system basis.

HPE 3PAR Application Software Suite for Exchange This bundle gives you the essentials for use with Microsoft Exchange, including HPE 3PAR Recovery Manager for Exchange and the VSS Provider software. This suite is optional and licensed on a per-system basis.

HPE 3PAR Application Software Suite for Oracle Everything you need for protecting Oracle databases, including HPE 3PAR Recovery Manager for Oracle and Oracle Space Reclamation capabilities, sold as an optional suite and licensed on a per-system basis.

HPE 3PAR Application Software Suite for SQL Protect Microsoft SQL databases with HPE 3PAR Recovery Manager for Microsoft SQL and the 3PAR VSS Provider software, bundled with this optional suite and licensed on a per-system basis.

HPE 3PAR Reporting Software Suite Enhance system visibility and reporting capabilities with this optional suite, which includes HPE 3PAR System Reporter software and the 3PARInfo application, licensed on a per-system basis.

HPE Services

Make the most of your investments by taking advantage of HPE Technology Services. We offer a rich portfolio of consulting and support services with three levels of support options. Choose the one that best suits your IT environment and business demands:

Optimized Care for mission-critical environments demanding the best performance and stability

- **Support:** HPE Proactive Care 24x7, plus 20 credits per year
- **Additional option:** 3-year HPE Storage Proactive Care Personalized Support, 3-year Personalized Support Additional Day, and 3-year HPE Proactive Select 30 Credits Service

Standard Care for business-critical environments needing to maintain the highest level of uptime

- **Support:** HPE Proactive Care 24x7, plus 10 credits per year
- **Additional option:** 3-year HPE Storage Proactive Care Personalized Support, 3-year Personalized Support Additional Day, and 3-year HPE Proactive Select 30 Credits Service

Basic Care for the basic recommended support service level

- **Support:** HPE Proactive Care 24x7, plus 10 credits per year
- **Additional option:** 3-year HPE Proactive Select 30 Credits Service, 1-year HPE Proactive Select 10 Credits Service

Additional HPE Storage Services recommendations:

Discovery, planning, and design services

- **Discovery services:** HPE Backup & Recovery Efficiency Analysis Service
- **Planning services:** HPE Backup & Recovery Impact Analysis Service
- **Design services:** HPE Data Profiling Service; HPE Backup & Recovery Modernization Service

Deployment services

- HPE System and Software Installation and Startup Services

Integration services

- HPE Storage Data Migration Service
- HPE Data Replication Solution Service
- HPE Enhanced Implementation Service for SANs
- HPE StoreOnce Backup System Health Check Service
- HPE Storage and Data Consultant Residency Services

We can also tailor a service solution for your unique requirements. Hewlett Packard Enterprise brings together deep expertise, proactive and business-critical support, and a strong partner network—along with a full set of infrastructure services designed to power a converged infrastructure.

For more information, please visit hp.com/services/storage.

HPE Factory Express

HPE 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 to speed deployment.

For more information, please visit hp.com/go/factoryexpress.

Customer technical training

Hewlett Packard Enterprise offers a variety of training courses on storage software, networking, archiving, and disk storage systems. Our classes are available in several delivery modalities—from traditional instructor-led courses at one of our 80 training centers worldwide to online and onsite training. For more information, please visit hp.com/learn/storage.

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.

Easily manage your evolving storage environment

With HPE StoreSystem, you can easily handle growing data, reduce operational costs and risks, and protect data.

Learn more at
hp.com/go/storesystem



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