HP StoreVirtual 4000 Storage

Versatile storage for your virtualized environments

In today's virtualized environments, traditional storage cannot adapt to the increasing requirements of performance, availability, and management. You need a simple, flexible storage solution ideally suited to the demands of your virtual data center.

HP StoreVirtual 4000 Storage, based on the LeftHand operating system, is a scale-out storage platform designed for the fluctuating needs of your virtualized environment. It's a solution that delivers on all fronts: availability, data mobility, disaster recovery, manageability, and growth. The StoreVirtual's all-inclusive feature set adapts to business demands and allows for affordable growth of storage as needed.

With inherent enterprise-class storage software functionality and leading virtualization software integration, StoreVirtual can support virtualization growth at all stages. Intuitive, common management simplifies storage administration. And, storage federation enables data mobility across tiers, locations, and between physical and virtual storage. StoreVirtual is also one of the most versatile storage platforms in the market today. Its software-defined storage Virtual Storage Appliance (VSA) software, and HP ProLiant rack and HP BladeSystem-based hardware models provide options to fit any infrastructure and budget.

Key features and benefits

Easy storage management for virtualized environments

• Platform integration with VMware and Microsoft® increases storage functionality and ease of use while application integration simplifies storage management for applications. Backup and recovery is equally easy with snapshot and Remote Copy integration for virtualization platforms and Microsoft Windows® applications.

• Managing hundreds of nodes in your environment is just as simple as managing your first two; whether they are on the same site or across multiple sites. The centralized management console (CMC) lets you configure, manage, and monitor your storage easily, making everyday operations simple and efficient.

• Updates and upgrades are stress-free. Update software with a single click. Migrate data online to another cluster of storage hardware. Swap nodes within a cluster for maintenance, or upgrade to new generation technology without any downtime. StoreVirtual is designed to give you peace of mind.

Scale array capacity and performance without disrupting applications

• Scale linearly in both capacity and performance with the scale-out architecture of StoreVirtual. Scaling storage is as simple as adding nodes to the cluster, so you can seamlessly and non-disruptively grow as your business grows.

- Network RAID technology aggregates all resources and capacity into a single storage pool. So, every volume in the cluster can access all available capacity. This also means all cluster resources—CPUs, RAID controllers, NICs, caches, and disk spindles— can contribute to performance.

- To remove any single point of failure, the Network RAID functionality also stripes and protects multiple copies of data across a storage cluster. Redundancy is managed on a per-volume basis—to improve storage utilization, and match the data protection of the volume to the application's requirements.

- With iSCSI and optional Fibre Channel connectivity, StoreVirtual works great even in mixed protocol environments. You can deploy a single, flexible storage solution for all locations. Be prepared for what the future may bring—migrate from one protocol to the other without having to redesign or replace your storage.

High data availability and superior disaster recovery
- With proven 99.999 percent[1] high availability and reliability, the storage cluster can sustain multiple concurrent failures and still keep data online and accessible to applications. What this means to you is worry-free storage for your centralized data center, as well as for remote and branch offices.

- VMware certified multi-site disaster recovery delivers business continuity with failover that is transparent to users and applications. The multi-site configuration maintains data availability beyond a single physical or logical site, and validates full compatibility with VMware High Availability (HA) features.

- LeftHand Remote Copy lets you asynchronously replicate thin provisioned, reservationless snapshots between primary and remote locations. You can centralize backup and disaster recovery on a per-volume basis while using application-integrated snapshots for faster recovery.

- With LeftHand Peer Motion, an online data mobility technology, you can move volumes across all deployed StoreVirtual nodes regardless of platform or drive type. StoreVirtual is the only product that offers data mobility across tiers, locations, and between virtual and physical storage.

Affordable enterprise functionality with a comprehensive feature set
- The all-inclusive license of StoreVirtual covers enterprise-class storage features, management, and value-add tools. You don't need to purchase additional software—buy only the storage you need today and grow non-disruptively in the future.

- Scale from software-defined storage VSA software to ProLiant rack and BladeSystem-based hardware models. Mix and match product models that best fit your infrastructure. The result is simplified management and feature consistency.

- Transform the internal storage of your existing vSphere and Hyper-V servers into fully featured shared storage. HP StoreVirtual VSA creates a converged infrastructure that enables data mobility across virtualized servers, sites, and between virtual and physical storage platforms.

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. Visit hp.com/go/factoryexpress.

Customer technical training

We offer a variety of training courses on storage software, networking, archiving, and disk storage systems. Our classes are available in many delivery modalities—from traditional instructor-led courses at one of our 80 training centers worldwide to online and onsite training. Visit hp.com/learn/storage.

HP Financial Services

HP Financial Services provides innovative financing and financial asset management programs to help you acquire, manage, and ultimately retire your HP solutions. Visit hp.com/go/hpfinancialservices.

1 Source HP Storage quality review weekly data, August 2012.

Technical specifications

HP StoreVirtual 4000 Storage
HP StoreVirtual 4130 and 4330 models

Drive description	(256) SFF SAS or
	(256) SFF MDL SAS
	Maximum drives supported
Capacity	2.4 TB starting
	256 TB maximum
Storage expansion options	Add incremental nodes into the storage cluster to expand capacity or performance (always done without disruption)
Host interface	1GbE iSCSI (128) Ports
	10GbE iSCSI (64) Ports
	8 Gb Fibre Channel (64)
	Maximum, depending on model;
	Optional upgrade to 10GbE iSCSI (64) Ports
Compatible operating systems	Apple OS X
	Citrix XenServer
	HP-UX
	IBM AIX
	Microsoft Windows Server 2008
	Microsoft Windows Server 2012
	Novell NetWare
	Oracle Enterprise Linux
	Red Hat Linux
	Oracle Solaris
	SUSE Linux
	VMware
	All major operating systems and hypervisors are supported. For more information, please visit hp.com/go/StoreVirtualCompatibility
Clustering support	Hyper-redundant clustered storage
Availability	Redundant, hot swap power supplies;
	Redundant fans;
	Redundant, hot plug hard drives, integrated storage controller with flash backed write cache;
	Disk RAID 5, 6, and 10;
	Hyper-redundant clustered storage;
	Network RAID levels (per volume) 0, 5, 6, 10, 10+1, and 10+2 for up to four copies of your data allows data to remain available in the event of a disk, controller, storage node, power, network, or site failure.
Thin Provisioning support	LeftHand Thin Provisioning
Snapshot support	LeftHand Application Managed Snapshots
Replication support	Remote Copy asynchronous replication with bandwidth throttling;
	Multi-site disaster recovery with synchronous replication
SmartClone	LeftHand SmartClone
Management	CMC
	HP ProLiant Integrated Lights-Out 4 (iLO 4) Remote Management
	Baseboard Management Controller IPMI 2.0
Warranty	3-year parts, 3-year labor, 3-year onsite

Services and support

Tap into the HP support services advantage, backed by the strategic and technical know-how of our consulting experts—for a single source solution that makes the most of your investments. Depending on your individual support requirements, choose from three levels of care that cover the entire lifecycle to better address your needs:

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

Support: Proactive Care 24x7; Plus, 20 credits/year

Additional option: 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—For business-critical environments that need to maintain the highest level of uptime

Support: HP Proactive Care 24x7; Plus, 10 credits/year

Additional option: 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—For the minimum recommended support

Support: HP Support Plus 24; Plus 10 credits/year

Additional option: 10 Proactive Select Credits per year

Additional HP Storage Services recommendations to support your HP StoreVirtual needs:
Discovery, Planning, and Design services—HP Storage Efficiency Analysis Service; HP Storage Impact Analysis Service; HP Storage Modernization Service

Deployment services
• HP StoreVirtual 4000 Storage Installation and Startup Service
• HP StoreVirtual VSA Software Installation and Startup Service
• HP P4800 G2 SAN Solution for BladeSystem Installation and Startup Services
• HP P4000 SAN/iQ Central Management Console Installation and Startup Service

Integration services
• HP Data Migration Service
• HP Storage and Data Residency Services
• P4000 SAN/iQ Update Service
• HP Performance and Capacity Assessment for P4000
• HP SAN Assessment Service
• HP Proactive Select

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

For more information
To know more about HP StoreVirtual 4000 Storage systems, visit
hp.com/go/storevirtual4000.

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