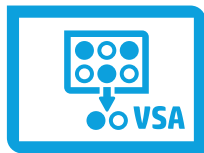


HP StoreOnce Backup



Learn about how HP StoreOnce Backup systems offer your data the “insurance” it needs.

HP StoreOnce Backup with HP StoreOnce Catalyst is the only federated deduplication solution¹ providing disk-based backup for IT environments, from the smallest remote sites to the largest enterprises. It helps our customers reduce the risk of data loss, reduce the cost of data protection, in particular management overhead and increase their agility to move backup data around their organization in deduplicated form providing disaster recovery and reducing network bandwidth expense.

If unpredictable data growth has resulted in management complexity and risk then HP StoreOnce Backup systems with StoreOnce Catalyst software will resolve these problems, providing a simple consistent, high performance architecture that spans your organization.

You can reduce the amount of space needed to store backup data by 95 percent² and choose between powerful dedicated appliances for larger offices and data centers, and flexible virtual appliances for smaller and remote offices. StoreOnce industry-leading backup and restore speeds means that you can meet shrinking backup windows and recovery service-level agreements (SLAs). Plus, with HP StoreOnce as the industry’s only federated deduplication technology, you can dedupe in any location anywhere and control the movement of dehydrated data across the enterprise using your backup application.

Seamlessly integrating with your current backup environment, StoreOnce Backup provides flexible integration for Ethernet, Fibre Channel and iSCSI SAN, and virtualized environments.

¹ HP internal competitive comparisons of the places where HP deduplication can be deployed, December 2013

² HP Get Protected Guarantee program
hp.com/storage/getprotected

Key features and benefits

Industry-leading, scale-out, scale-up architecture to meet enterprise requirements

The scale-out, scale-up architecture allows you to grow as your business needs dictate and not be limited by technology or vendor constraints. Choose capacity points available through virtual backup solutions or dedicated appliances that start small and allow you to add in virtual capacity, storage, or nodes as needed.

With a range of capacity points, StoreOnce Backup suits all requirements from small remote offices to enterprise data centers with centralized monitoring through HP StoreOnce Enterprise Manager.

For enterprise data centers, the HP StoreOnce 6500 scales from 120 TB raw (72 TB usable) to 2240 TB raw (1728 TB usable). StoreOnce Federated Catalyst simplifies manageability and allows more scalability while maximizing backup and restores speeds through automatic load balancing, all while ensuring failover and autonomic restart is maintained.

For midsize data centers or regional offices, choose from HP StoreOnce 4500 or StoreOnce 4700 and scale from 24 TB raw (16 TB usable) to 192 TB raw (160 TB usable), or the high density HP StoreOnce 4900 to scale from 60 TB raw (36 TB usable) to 560 TB raw (432 TB usable) in a small footprint.

For enterprises with large remote and regional offices or SMBs looking for a comprehensive data protection solution, the StoreOnce 2900 Backup appliance provides the ideal solution which can scale from 24 TB raw (15.5 TB usable) to 48 TB raw (31.5 TB usable) within the same 2U footprint for valuable rack space savings.

For small locations and branch offices the entry level HP StoreOnce 2700 appliance (5.5 TB) or the StoreOnce VSA are efficient backup targets and enable cost-effective backup data replication to a remote StoreOnce appliance for added data protection.

The StoreOnce VSA leverages the flexibility of virtual infrastructures by packaging the StoreOnce deduplication technology in virtual appliances for VMware®, Microsoft® Hyper-V and Ubuntu KVM environments. StoreOnce VSA is licensed at 4 TB, 10 TB, and 50 TB capacity points and can be deployed on any industry standard server with the appropriate specification. To enable scalability, the 4 TB license can be upgraded to 10 TB and the 10 TB license can be upgraded to a 50 TB license. A 1 TB StoreOnce VSA can also be downloaded free of charge.

Federated deduplication across the enterprise with a single deduplication technology

Deduplicate anywhere—at the application source or at the backup server or at the target appliance. Choose to deduplicate in a hardware or virtual appliance or in software with Data Protector. Deduplicate where it makes sense for your business, not where technology vendors' limitations mandate. Save time and money by moving backup data around the enterprise in its deduplicated state.

HP StoreOnce delivers a unified solution for seamless data movement across the enterprise; with cost-effective StoreOnce VSAs ideal for smaller remote offices, high-performance hardware appliances for larger sites, and highly scalable, powerful systems for your data center.

Federated deduplication is supported by many of StoreOnce's data protection software partners. HP Data Protector, Symantec NetBackup and Backup Exec software through OST, BridgeHead Software and using the StoreOnce plug-ins for direct backup from Oracle RMAN and Microsoft SQL Server.

HP StoreOnce Federated Catalyst in a multi-node system allows a store that spans more than one node, reducing the number of stores, and thus simplifying management of large backup environments.

Back up within your window and meet your restore SLAs with StoreOnce industry-leading performance

- A broad range of superior price/performance points to meet backup windows across the enterprise
- Up to 139 TB/hr backup speeds at the high end, with StoreOnce 6500 and StoreOnce Catalyst
- Up to 22 TB/hr with StoreOnce 4900, and StoreOnce 4700, or up to 14 TB/hr with StoreOnce 4500 and StoreOnce Catalyst
- Up to 5.8 TB/hr for StoreOnce 2900 with StoreOnce Catalyst
- Up to 3.7 TB/hr with StoreOnce 2700 and up to 6 TB/hr for StoreOnce VSA with StoreOnce Catalyst
- HP StoreOnce Backup delivers the fastest restore performance at up to 75 TB/hr³ or up to 119 percent⁴ of the backup performance, and HP states the restore speed unlike other vendors.

StoreOnce Integrity Plus architecture to ensure your data is safe, secure, and recoverable

HP StoreOnce has been architected for security. Whether that is error checking to ensure that what you save to disk is what you backed up, high availability with autonomic restart on the StoreOnce 6500 or encryption of both data at rest or in flight to industry standards. Couple that with secure erase of data to ensure your data is erased and cannot be accessed by unauthorized people and file system consistency checks to validate your data, you can be assured your data is safe with HP StoreOnce.

Automated, efficient backup and disaster recovery operations with StoreOnce Catalyst

Manage backup and disaster recovery (DR) operations from a single pane of glass with StoreOnce Catalyst. Catalyst over Fibre Channel provides all the independent software vendor (ISV) control and source-side deduplication benefits of the current StoreOnce Catalyst but via your Fibre Channel fabric.

Implement disaster recovery plans that were not previously feasible due to lack of multi-site capabilities, cost of bandwidth, and time.

One-to-many disaster recovery moves data simultaneously from one site to many sites.

Cascaded disaster recovery moves data sequentially from one site to any number of other sites.

Alerting and trending in StoreOnce Enterprise Manager enables backup capacity management.

Converged Data Protection option for HP 3PAR StoreServ

Protect your business critical applications without impacting performance using the Express Protect feature of HP StoreOnce Recovery Manager Central (RMC) software. This automated, non-intrusive solution combines the simplicity and performance of snapshots with the reliability and cost-effective retention of deduplicated backups. RMC integrates HP 3PAR StoreServ primary storage and StoreOnce Backup for converged data protection that delivers assured recovery of application-consistent recovery points with flexible recovery options. RMC offers a simple, efficient, and fast backup and recovery solution, which augments traditional backup software.

³HP internal engineering testing, January 2014

⁴The 119% is derived by dividing restore speed of 75 TB/hr by VTL backup speed of 63 TB/hr

HP StoreOnce Backup Purpose Built Appliances

Drive description	(560) LFF SAS Maximum, depending on model
Drive type	4 TB 6G 7.2K LFF Dual-port MDL SAS 2 TB 6G 7.2K LFF Dual-port MDL SAS 2 TB 3G 7.2K LFF Dual-port MDL SAS Supported, depending on model
Capacity	8 TB to 2240 TB raw 5.5 TB to 1728 TB usable depending on model
Transfer rate	139 TB/hr Maximum, depending on model and backup interface
Deduplication	HP StoreOnce federated deduplication
Storage expansion options	StoreOnce upgrade kits and expansion modules are available for all HP StoreOnce productions (except 2700) and scalability is dependent on model selected
Host interface	10GbE and 8 Gb Fibre Channel and 1 Gb Ethernet and 1GbE, 10GbE vNIC Host interface type and number of ports per controller are dependent on model selected
RAID support	Hardware RAID 6 (RAID 5 with StoreOnce 2700 only)
Replication support	Yes—HP StoreOnce Replication and StoreOnce Catalyst
Target for backup applications	NAS (CIFS/NFS), StoreOnce Catalyst, Virtual Tape Library
Tape devices emulated	HP LTO-2/LTO-3/LTO-4/LTO-5/LTO-6 Ultrium Tape Drives in HP MSL2024 Tape Library, HP MSL4048 Tape Library, HP D2D generic library with HP D2D generic tape library. IBM TS3500 tape library and IBM TD3 tape drive
Number of NAS targets and virtual tape libraries	(384) maximum, depending on model
Maximum number of source appliances	(384) per target device
Form factor	19-inch rack
Warranty (parts-labor-onsite)	1-1-1

HP StoreOnce Backup Virtual Appliances

Capacity	Licensed at 4 TB, 10 TB, 50 TB Upgrades from 4 TB to 10 TB and 10 TB to 50 TB Free 1 TB StoreOnce VSA (no support)
License period	3 or 5 years license to use Can be extended at end of 3 or 5 year license term
Transfer rate	6 TB/hr Maximum, depending on licensed capacity and backup interface
Deduplication	HP StoreOnce federated deduplication
Storage expansion options	Storage is allocated using virtual disks with 1 TB, 5 TB, or 10 TB sizes
Target for backup applications	Catalyst, CIFS, NFS over Ethernet, VTL
Replication support	Yes—HP StoreOnce Replication and StoreOnce Catalyst
Tape devices emulated	HP LTO-2/LTO-3/LTO-4/LTO-5/LTO-6 Ultrium Tape Drives in HP MSL2024 Tape Library, HP MSL4048 Tape Library, HP D2D generic library with HP D2D generic tape library
Number of virtual tape libraries and NAS targets	16 (50 TB StoreOnce VSA)
Maximum number of source appliances	12 (50 TB StoreOnce VSA)
Form factor	Virtual appliance
Support	Business hours phone support included for duration of license term. Can be upgrade with Care Packs



HP Storage Quick ROI Calculators

Take five minutes to calculate the potential three year cost savings and ROI of migrating from your current storage to the newest HP storage and backup systems. Create migration scenarios from your existing infrastructure to HP StoreOnce Backup (information protection).

The total package

Data replication

Replication, is licensed by target appliance. Unlike some more expensive licensing schemes, no replication license is required for appliances that are only replication sources. The dedupe-optimized replication is available for the HP StoreOnce Backup systems to provide centralized data protection and DR for remote offices. HP StoreOnce Catalyst, licensed by the system or couplet, is one of the most efficient backup interfaces that simplifies management and enhances the efficiency of data movement across the enterprise.

For more information on licensing replication for the HP StoreOnce Backup system, visit the product's Q&A page at hp.com/go/StoreOnce.

Scalable upgrades

HP StoreOnce Backup systems scale to meet the need to protect growing data volumes:

- HP StoreOnce 2700 is not scalable and there are no capacity upgrades available.
- The StoreOnce VSA has 3 or 5 year licenses. StoreOnce VSA is licensed to enable up to 4 TB, 10 TB, or 50 TB of usable capacity. Capacity upgrades are available to increase maximum capacity from 4 TB to 10 TB and 10 TB to 50 TB.
- HP StoreOnce 2900—start with base level of 24 TB raw (15.5 TB usable) capacity using 6x4 TB disks in a 2U unit and scale up to 48 TB raw (31.5 TB usable) capacity using an additional 6x4 TB disks upgrade kit within the same 2U chassis.
- HP StoreOnce 4500—start with 24 TB raw (16 TB usable) in a 2U unit and expand using up to 3 additional storage expansion/capacity upgrade kits to increase available capacity to a total of 168 TB raw (124 TB usable). You can add 24 TB or 48 TB storage expansions and it is possible to add a mixture of both. A fully configured StoreOnce 4500 is 8U.
- HP StoreOnce 4700—start with 24 TB raw (20 TB usable) in a 4U unit and expand using up to 7 additional shelves using the corresponding storage expansion/capacity upgrade kit for up to 192 TB raw (160 TB) of total usable storage. A fully configured StoreOnce 4700 is 18U.
- HP StoreOnce 4900—start with 60 TB raw (36 TB usable) in a 7U unit and expand using up to 5x44 TB (36 TB usable) capacity upgrade kits to complete the first two storage drawers for up to 280 TB raw (216 TB usable). If more storage is needed, add an additional expansion kit containing 60 TB raw (36 TB usable) capacity and again add up to 5 additional 44 TB (36 TB usable) capacity upgrade kits to complete the second set of drawers for a total capacity of up to 560 TB raw (432 TB usable). Note that fully expanded, the HP StoreOnce 4900 includes 4 drawers of disk (2 drawers in each unit). A fully configured HP StoreOnce 4900 is 12U (or 36 TB per U in terms of density).
- HP StoreOnce 6500—start with 120 TB raw (72 TB usable) and expand to 2240 TB raw (1728 TB usable). The HP StoreOnce 6500 120TB system consists of two nodes pre-integrated into HP's standard depth 42U racks. Add up to 5 capacity upgrade kits to each couplet. Each upgrade kit contains 22x4 TB disks, giving 88 TB raw capacity (72 TB usable), allowing up to a maximum of 560 TB raw capacity (432 TB usable) associated with the original couplet. A fully configured couplet with 5 capacity upgrade kits, offers up to 560 TB raw capacity (432 TB usable). Add in one more HP StoreOnce 6500 120TB system and scale up by adding capacity upgrade kits. Giving a maximum configuration of two fully configured HP StoreOnce 6500 120TB systems of two couplets with a total capacity of 1120 TB raw capacity (864 TB usable) in a single rack. To scale out to 2240 TB raw (1728 TB usable) add an HP StoreOnce 6500 120TB backup for extra racks and populate as before.

HP Data Protector software

HP Data Protector is backup software that enables customers to centrally manage and orchestrate protection for data center and remote offices, from managing replication and store creation, to securing data in local storage and within the network; e.g., encrypted StoreOnce stores and IPsec. HP Data Protector provides simple management without having to rethink how backup and restores are performed or taking on additional infrastructure spend. Data Protector 9 delivers adaptive intelligence, analytical reporting, secure data transfer, highly intuitive and interactive monitoring dashboard, rapid root-cause analysis and problem solving, and ability to predict capacity needs to optimize CAPEX/OPEX investments.

Periodic copy to HP Tape for archive

The StoreOnce Backup systems are ideal solutions for regular and daily backup; there is no longer any need to store daily incremental backups on tape. However, HP still recommends periodic copy to tape as the most cost-effective, energy-efficient, and robust solution for long-term archival of data to meet regulatory requirements or offsite storage for disaster recovery where data replication is not an option. Copy to tape is executed using the backup and recovery management software such as HP Data Protector. For more information, visit hp.com/go/tape.

HP Technology Services

Expert HP storage consultants and service professionals sit down with you and your team to map your storage needs. Not only can we help you accelerate implementation and reduce deployment risk, but we can also help you realize the full value of your storage purchases as you transform storage for the New Style of IT.

Advise, transform, and integrate

Navigate through the complexities of storage, backup, archive, disaster recovery, and Big Data with advisory, transformation, and integration consulting.

Deploy and implement

Access expertise to support deployment, operations, relocation, sanitization, and disposal, plus improvement-focused education.



Resources

QuickSpecs

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

Gain the skills you need with HP ExpertOne training and certification. With HP Converged Storage training, you can accelerate your technology transition, improve operational performance, and get the highest return on your HP investment. Our training is available when and where you need it, through flexible delivery options and a global training capability. hp.com/learn/storage

Customize your IT lifecycle management, from acquisition of new IT, management of existing assets, and removal of unneeded equipment. hp.com/go/hpfinancialservices

Operate and support

Find the level of personalized, proactive, and simplified support right for your business.

Note

Specific service availability varies by product

Foundation Care

System-level IT hardware and software support delivers flexible coverage window and response time for more choice and simplicity.

Proactive Care

Combined reactive and proactive services provide easy-to-purchase, cost-efficient system-level support coupled with personalized expert advice and products connected to HP to help prevent problems and reduce downtime.

HP Proactive Care Advanced—builds and incorporates on Proactive Care and also gives customers personalized technical and operational advice from an assigned, local Account Support Manager for personalized technical collaboration, flexible access to specialist skills to help optimize business critical IT, and Enhanced Critical Incident Management to help so the business is not affected if there is a system or device outage.

Datacenter Care

Get the support you need to deploy, operate, and evolve your data center environment to be hybrid-cloud ready with single-point-of-accountability for HP and others' product. Get connected and get back to business—HP Storage Technology Services provide the path to get your HP Storage solutions and your business connected to HP. Once connected, our experts are able to scan your system and run health checks, then use that data to create personalized reports and recommendations for actions to take to prevent problems and downtime.

Learn more at

hp.com/go/StoreOnce

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4AA4-3329ENW, March 2015, Rev. 8

