Overview

HPE StoreOnce Systems

Does data growth leave you struggling with complex, distributed, and costly data protection? Do you have data that's not being protected because backup windows aren't long enough or backup jobs are failing? Tackle the cost, risk and complexity of data protection with HPE StoreOnce; disk-based, deduplicating, backup systems providing automated backup, data recovery and data retention for the new style of IT.

Cut the cost of data protection with a single, unified deduplication architecture offering best in class price-performance across the range. HPE StoreOnce spans from small, remote offices to enterprise data centers with highly scalable dedicated appliances to agile virtual appliances and with your choice of backup and recovery software to deliver robust, flexible enterprise-wide data protection. StoreOnce can reduce the amount of backup data you need to store by up to 95%, and with our scale-out architecture you can pay-as-you-grow to retain up to 34 petabytes of data in a single pool.

Reduce the risk with industry-leading backup speeds of up to 184 TB/hr* so you can meet shrinking backup windows and the most stringent SLAs. When it comes to backup, data recovery and data retention, HPE StoreOnce includes all the features you'd expect from disk backup, together with built-in data encryption to secure your Data at Rest and Data in Flight**.

Simplify and enable your converged infrastructure, with HPE's single StoreOnce deduplication technology managing the movement of data across the enterprise has never been easier. HPE StoreOnce Catalyst enables Federated Deduplication so you can choose where to deduplicate your data and eliminating the need for dedicated deduplication appliances. It also allows Catalyst stores to span nodes simplifying backup management and optimizing available storage in large environments. StoreOnce also provides seamless integration and flexible connectivity into Fibre Channel (FC), iSCSI SAN, GbE/10GbE, virtualized and other environments and is supported across a wide range of backup applications.

NOTES:

*Assumes the use of HPE StoreOnce Catalyst. Actual performance is dependent upon configuration data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration.

** Data in Flight encryption via IPSec is supported on HPE StoreOnce Catalyst only. In addition, write performance may be impacted, however performance improvements should be seen after first ingest.

What's New

New products:

- New for April 2016 : StoreOnce VSA 20 TB license
- New for April 2016 : StoreOnce VSA perpetual licenses

- New for March 2016: StoreOnce 5500 system (replaces 4900)
  - The StoreOnce 5500 delivers a scalable 7 to 22U solution with 36 TB to 864 TB of usable* capacity (60-1120TB RAW)
  - With speeds of up to 37.7 TB/hour* using HPE StoreOnce Catalyst.

- New for March 2016: StoreOnce 6600 system (replaces 6500)
  - The StoreOnce 6600 delivers a scalable solution with 72 TB to 1728 TB of usable* capacity (120-2240 TB RAW)
  - With speeds of up to 184 TB/hour* using HPE StoreOnce Catalyst.

Overview

- New for December 2015: StoreOnce 3100, 3520, 3540 and 5100 appliances

New features and benefits:

- Now offering best-in-class scalability and performance for every data protection environment
  - 3x more mid-range scalability and 30% more performance at a comparable price to competing disk-based backup systems
  - 2x more enterprise scalability with 2.8x more performance than any competing products

- Flexible choice for number and types of connectivity, 10GbE-T, 10GbE, 8Gb FC or 16Gb FC (5500/6600 only)
  - Customers can choose the connectivity options that makes the most sense for their environment. Also, provides flexibility for future growth/changes

- Licenses for StoreOnce systems ordered with initial system are pre-installed in the factory
  - Provides customers with a smoother out of box experience - no longer needing to download license keys or possibly losing the entitlement documentation during unpacking

- IPv6 support for NFS and VT iSCSI interfaces
  - Meets the growing demands for IPv6 support. More customers (especially governmental) need products that support IPv6.

- Addition of a simple network wizard
  - Provides customers with a tool to ease the initial IP configuration prior to continuing with the remaining product setup

- StoreOnce 3100, 3520, 3540, 5100, 5500 and 6600 Catalyst over Fibre Channel support on IBM AIX platforms
  - Catalyst over Fibre Channel provides all the ISV control and source side deduplication benefits of current StoreOnce Catalyst but via your Fibre Channel fabric.
  - Ability to support Fibre Channel environments running StoreOnce Catalyst on IBM AIX servers

- Centralized Encryption Key Management support for 3100, 3520, 3540, 5100, 5500 and 6600.

NOTE:

*In all cases, actual performance is dependent upon configuration, data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration. Actual usable capacity for customer data storage is dependent upon drive formatting, log file and meta data size, housekeeping backlog.
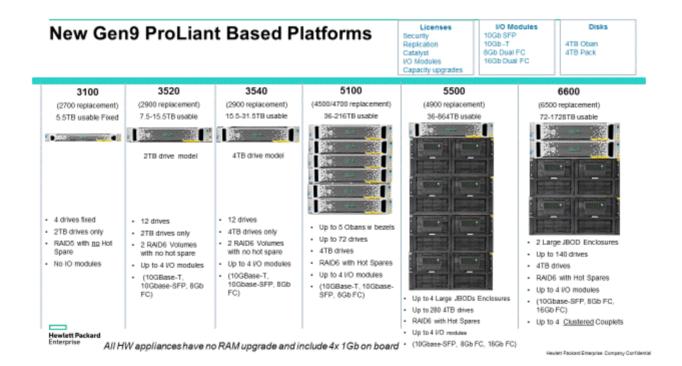
To optimize capacity utilization and in accordance with performance requirements, your capacity requirements should be planned following Recommended Configuration guidelines:

http://h20565.www2.hpe.com/portal/site/hpsc/public/psi/manualsResults/?sp4ts.oid=5196525

HPE StoreOnce Backup Models

Target deployment	Product options	Max usable capacity* (before dedupe) Max performance* with StoreOnce Catalyst
Enterprise powerhouse	HPE StoreOnce 6600	Scale from 72 to 1728 TB usable * Backup speeds up to 184 TB/hr*
	HPE StoreOnce 5500	Scale from 36 to 864 TB usable * Backup speeds up to 37.7 TB/hr*
Mid-range to enterprise data centers	HPE StoreOnce 5100	Scale from 36 TB to 216 TB usable * Backup speeds up to 26.7 TB/hr*
	HPE StoreOnce 3540	Scale from 15.5TB to 31.5 TB usable* Backup speeds up to 12.7 TB/hr*
Small to mid-range data centers and remote offices	HPE StoreOnce 3520	Scale from 7.5 to 15.5 TB usable * Backup speeds up to 12.7 TB/hr*
	HPE StoreOnce 3100	5.5 TB usable* Backup speeds up to 6.4 TB/hour*
	HP StoreOnce VSA	4, 10, 20 or 50 TB usable* depending on license

For help with choosing the most appropriate StoreOnce Backup systems for your specific environment, we recommend you talk to your Hewlett Packard Enterprise partner or sales advisor about using the HPE Storage Sizing Tool which can be downloaded from the Downloads section of http://www.hp.com/go/storeoncesizer
For previous versions of HPE StoreOnce Backup models please refer to:
http://h18004.www1.hp.com/products/quickspecs/13218_div/13218_div.html

NOTE:
*In all cases, actual performance is dependent upon configuration, data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration. Actual usable capacity for customer data storage is dependent upon drive formatting, log file and meta data size, housekeeping backlog.

HPE StoreOnce Backup Models

To optimize capacity utilization and in accordance with performance requirements, your capacity requirements should be planned following Recommended Configuration guidelines:

http://h20565.www2.hpe.com/portal/site/hpsc/public/psi/manualsResults/?sp4ts.oid=5196525

Common Features and Benefits

The following features and benefits apply to all HPE StoreOnce products. Where differences exist between models, they are explained in the description of the benefit.

Scaling out capacity across the enterprise	Keeping pace with data growth, HPE StoreOnce Systems offer scale-out architecture that allows you to pay as you grow. Our scalable solutions span from an entry level 7.5-15.5TB usable, up to an enterprise class 1728TB usable.
	Choose from dedicated backup appliances to match the capacity and performance requirements of larger offices and data center deployments or virtual appliances utilizing existing infrastructures for virtualized environments and smaller and remote offices.
	Whatever the HPE StoreOnce solution that meets your needs, you can choose capacity points that start small and scale-out - just configure for a higher capacity (with StoreOnce VSA), or use upgrade kits with expansion licenses or shelves (3520, 3540, 5100) or simply add more disks (5500/6600) or additional couplets (StoreOnce 6600 only).
	Please refer to the latest Concepts and Configuration Guide for more information: http://h20565.www2.hpe.com/portal/site/hpsc/public/psi/manualsResults/?sp4ts.oid=5196525
	NOTE: *To optimize capacity utilization and in accordance with performance requirements, your capacity requirements should be planned following Recommended Configuration Guidelines
Reducing your backup data storage needs	HPE StoreOnce deduplication reduces the disk space required to store backup data sets by typically 20x without impacting backup performance. Retaining more backup data on disk for longer, enables greater backup data accessibility for rapid restore of lost or corrupt files and reduces impact on business productivity while providing cost savings in disk storage, IT resource, physical space, and power requirements.
	For example, using HPE StoreOnce deduplication with a fully configured HPE StoreOnce 6600 can provide extended data retention on the same disk footprint for up to 34 PBs of backup data.
Meeting shrinking backup windows	Industry leading performance - protect large amounts of data within short backup windows with native high performance or the enhanced speed of HPE StoreOnce Catalyst.
	Consolidate multiple parallel backup streams via standard Ethernet or Fibre Channel network to a single disk-based system offering best in class performance across the portfolio, including backup speeds of up to 184TB per hour* with the top of the range HPE StoreOnce 6600 and HPE StoreOnce Catalyst.
	You can enhance performance by deduplicating anywhere; at the application source or at the backup server or at the target HPE StoreOnce appliance. Federated Deduplication means you can deduplicate where it makes sense for your business, not where technology vendor limitations mandate. Federated Deduplication is available across all HPE StoreOnce systems, in conjunction with all applications that support StoreOnce Catalyst.
	NOTE: *Actual performance is dependent upon configuration data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration.

Common Features and Benefits

Reducing the time to restore data	High speed backup is important, but when system failure strikes being able to restore your data in the shortest time possible is critical to minimizing downtime. That's why Hewlett Packard Enterprise offers industry-leading restore speeds with its StoreOnce product line
Freeing up your IT resources	Reduce the time spent managing multiple data protection devices and processes and free-up IT resources by consolidating and automating all of your backup to a single HPE StoreOnce system.

Designed for the new style of IT, StoreOnce supports the converged infrastructure by using HPE StoreOnce Catalyst to enable the seamless movement of deduplicated data across the enterprise. There's no need to deduplicate and rehydrate at each step, data can be replicated from remote sites to a central data center or disaster recovery site in deduplicated form, reducing network bandwidth and cost. All backup and replication jobs may be seamlessly managed by the backup application at your central data center.

StoreOnce Federated Catalyst allows Catalyst stores to span nodes simplifying backup management and optimizing available storage in large environments yet continuing to provide failover and autonomic restart to ensure your backups do not fail.

For organizations that have branch and small offices, HPE StoreOnce Backup with supported backup software helps you automatically protect the remote sites to reduce the risk of data loss. You can eliminate the need for trained staff and the cost of dedicated hardware if you use StoreOnce VSA at these sites.

Lowering the cost of data protection	With a typical deduplication ratio of 20:1, more backup data can be stored in a smaller footprint meaning less capacity needs to be purchased. What's more, the highly scalable HPE StoreOnce portfolio allows you to pay-as-you grow.

HPE StoreOnce deduplication also enables network efficient offsite data replication. All HPE StoreOnce systems use StoreOnce Federated data deduplication to significantly reduce the amount of data that needs to be replicated, enabling the use of lower bandwidth, lower cost links to transmit data offsite.

StoreOnce enabled replication opens the way to cost-effective centralized backup from remote sites or branch offices, and delivers a consolidated disaster recovery solution for the data center.

Reducing the risk to Data at Rest and Data in Flight**	With high-profile reports of data loss, and increasing levels of government legislation for data security, companies are increasingly seeking to encrypt their data. The HPE StoreOnce Security Pack provides for Data at Rest and Data in Flight encryption which prevents unauthorized access to data on disk that has been lost, stolen, or discarded, as well as, data being transmitted between devices. It also offers secure erase functionality. These functions can be configured on an application or store basis and are not restricted to the whole appliance. HPE StoreOnce Security pack is available for all HPE StoreOnce products.

Data in flight encryption is intended to be used to secure links between data centers for StoreOnce Replication or Low Bandwidth Catalyst Copy operations.
Using Data In Flight Encryption for direct backup operations to the StoreOnce appliance over a local network is not supported due to the performance impact of the encryption.

Common Features and Benefits

NOTE: ** Data in Flight encryption via IPSec is supported on StoreOnce Catalyst only. In addition, write performance may be impacted, however performance improvements should be seen after first ingest.

Seamlessly integrating into your environment	The HPE StoreOnce systems offer flexible backup, flexible connectivity and flexible configuration to reduce integration overheads and disruption.

Flexible backup is available with NAS (NFS, CIFS), iSCSI and FC virtual tape libraries (VTL) and StoreOnce Catalyst targets for backup applications. Supported by all leading backup applications, this allows each StoreOnce Backup system to be installed and used without additional investment in software.

Flexible connectivity enables fast, easy integration into Fibre Channel (FC), iSCSI SAN, GbE, 10GbE, Virtualized and other environments without disruption.

Furthermore, the HPE StoreOnce systems are easily rack-mounted in standard racks, while the performance leading HPE StoreOnce 6600 is pre-integrated into an HPE 42U rack for efficient use of space in the data center. |
| Delivering reliable backup and restore | In any storage system it is essential to ensure that the integrity of the data stored is maintained so data can be recovered exactly as it was written. There's nothing worse than discovering corrupted backups when you need to restore your data, consequently StoreOnce appliances include HPE StoreOnce Integrity Plus - industry leading patented technology to deliver data integrity throughout the lifecycle. With Integrity Plus you get inbuilt protection which not only checks data at many stages both in the backup process and when recovered, but also continually checks the data when at rest, correcting errors if necessary.
Additionally, HPE StoreOnce systems feature hardware RAID 6* to reduce the risk of data loss due to disk failure.
Our enterprise powerhouse, the HPE StoreOnce 6600, extends this reliability even further with autonomic restart and no single point of failure in the appliance by offering redundancy at every level.

*Exception is entry level StoreOnce 3100 which features RAID 5 |
| Protecting your primary storage directly | HPE StoreOnce Recovery Manager Central facilitates automated, efficient, non-intrusive backup and disaster recovery and provides converged data protection by integrating 3PAR StoreServ primary storage and StoreOnce Backup storage directly without the need for third-party ISVs. With Recovery Manager Central you get the simplicity and performance of snapshot-based protection to generate application-consistent recovery points combined with the reliability and efficiency of deduplicated backups for guaranteed recovery. |
| Protecting your remote offices | HPE StoreOnce systems are ideal for remote offices - providing a local backup target and an efficient deduplicated local data repository. If you are running a virtual server environment you can use the flexibility and simplicity of the HPE StoreOnce VSA, or choose dedicated appliances such as the StoreOnce 3100 depending on the infrastructure, performance and management requirements of your remote office deployments.

HPE StoreOnce also enables a Federated Deduplication solution for replication of backup to other sites, including the consolidation of backup and DR from multiple remote offices to the data center.
Multiple StoreOnce appliances and virtual machines can replicate to a single central StoreOnce appliance with for example 384 remote offices replicating to a single HPE |

Common Features and Benefits

StoreOnce 6600 target at the data center.

For very small remote offices which don't need a local store for fast recovery StoreOnce Catalyst may be installed on a local server at no cost. This performs deduplication of new or changed data and sends the data over the WAN for disaster recovery.

With HPE StoreOnce Catalyst the movement of data between sites is configured and controlled using your backup application as a single interface for the data protection solution. StoreOnce Catalyst supports a range of flexible configurations that enable the concurrent movement of data from one site to multiple sites, and the ability to cascade data around the enterprise (sometimes referred to as multi-hop).

HPE StoreOnce VSA

The HPE StoreOnce VSA extends the deployment options for StoreOnce with the agility and flexibility of a virtual appliance, removing the need to install dedicated hardware. This provides a flexible and a cost effective backup target for virtualized server environments. StoreOnce VSA can be used as part of a pure software defined data protection solution or in conjunction with StoreOnce purpose-built appliances - operation and integration with backup software is the same regardless of which one you choose.

Overview product specifications

	VSA 4 TB	VSA 10 TB	VSA 20 TB	VSA 50 TB
Usable configurable capacity	4 TB	10 TB	20 TB	50 TB
Catalyst write performance (max)	1 TB/hour	2 TB/hour	3 TB/hour	6 TB/hour
NAS, VT write performance (max)	400 GB/hour	800 GB/hour	1.2 TB/hr	2.4 TB/hour
Replication fan-in/fan-out (appliance)	8/2	8/2	8/2	8/2
Backup targets (recommended max)	4	6	6	8
Concurrent data streams (max)	16	24	24	32
Backup targets supported	Catalyst, VTL, NFS, CIFS (all over Ethernet)			
Hypervisor support	VMware ESXi 5.5, 6.0 Microsoft 2012 Hyper-V for more details see http://www.hpe.com/storage/BURAcompatibility			

license-to-use (LTU) term	Perpetual, 3 or 5 years
Technical support and access to software updates	Business hours phone technical support and entitlement to software updates included for the duration of the fixed-term or 3 years for perpetual licenses
Support Service	Available to upgrade and/or extend included technical support

Freeware: A 1 TB HPE StoreOnce VSA is also available for extended evaluation or non-critical deployments. This offers the same features as the larger products. This freeware product comes without entitlement to Hewlett Packard Enterprise support or the ability to buy Support Services for Hewlett Packard Enterprise support. This freeware version can be upgraded to any of the products in the table above by purchasing and applying the appropriate license. This is available from http://www.hpe.com/storage/FreeBackup

Key features and benefits of the StoreOnce VSA
- Flexibility - fast deployment, fast expansion and leverage of the hypervisor features for mobility and availability
- Easy to manage - the same well proven management interfaces as the purpose built StoreOnce appliances
- Exceptional value - one license includes all product features (Catalyst, Replication, Security) and access to Hewlett Packard Enterprise support for the duration of the licensed term
- Scalability - capacity upgrade licenses to scale from 4 TB to 50 TB

Configuration notes

Backup data capacity is added to the StoreOnce VSA using 1 TB increments or multiples of 1 TB, up to the

HPE StoreOnce VSA Backup

licensed capacity. It is recommended that at least one virtual disk is added before the StoreOnce VSA is powered-on. To achieve the performance detailed in the table above, it is recommended that the StoreOnce VSA is configured with the following minimum resources:

Configured capacity	1 TB to 4 TB	5 TB to 10 TB	10 TB to 20 TB	20 TB to 50 TB
Memory (min)	1 6GB	24 GB	24 GB	32 GB
Processor (min @ 2.2GHz)	2 vCPU	4 vCPU	6 vCPU	12 vCPU
IOPs (typical)	450	900	1,400	2,700

Configuring additional resources can improve the performance and enable more backup targets to be created. For details on setting up the StoreOnce VSA see the StoreOnce VSA Deployment and Configuration Guide that is included with the download package and also available via http://www.HPE.com/services

For VMware

- It is recommended that the virtual disks used to provide capacity for StoreOnce VSA are in a .vmdk format from a VMFS3 or VMFS5 data store. NFS data stores are supported but careful consideration of the performance implications should be made before deployment. RAW disks are not supported. Virtual disks should be thick provisioned.
- Typical Installation will take 20 minutes depending on the installation method used and the environment. Other factors that determine the installation time are the storage used, the host platform and the storage capacity configured.
- If the VMware host has AMD CPUs some configuration is needed to run the StoreOnce VSA. It is necessary to create a single host cluster with the EVC (Enhanced vMotion Compatibility) mode set to AMD generation 3 or earlier.
- StoreOnce VSA is supported for use with VMware vMotion and VMware Storage vMotion. It is not supported for use with the following VMware features: VMware High Availability (HA), VMware Fault Tolerance (FT), VMware Distributed Resource Scheduler (DRS), VMware Distributer Power Manager (DPM) and VMware Site Recovery Manager (SRM).

For Hyper-V

- StoreOnce VSA requires NTFS storage. There is no support for NFS data stores or pass-through disks. StoreOnce VSA can run on all processors supported for Windows Server Hyper-V provided the performance and quantity meets the minimum requirements for the capacity of StoreOnce VSA configured.
- Unzipping the virtual machine file can take up to 15 minutes. Installation time depends upon how heavily the Hyper-V Server is being used and how much capacity is configured.
- StoreOnce VSA supports thick provisioned virtual hard disks (.VHDX or .VHD).
- StoreOnce VSA supports use of Hyper-V Live Migration during backup and recovery operations.

For all hypervisors

- Capacity upgrade licenses are available - see table below. Adding a capacity upgrade license is non-disruptive. Once the new license is added increased backup data capacity can be configured. The larger usable capacity will require adding more memory and processor resources to meet stated performance. Adding resources requires the StoreOnce VSA to be restarted so these upgrades should be done outside backup times.
- The StoreOnce VSA requires significant disk I/O for backup and recovery operations as shown in the table above. The number, type and configuration of hard disks that provide capacity for the virtual disks is an important choice. The number of disks and the type of disk will significantly affect the I/O potential and consequently backup and recovery performance.
- To be resilient to hard disk failure it is recommended that RAID protection is used. To further reduce risk from physical hard disk failure, the disks used for StoreOnce VSA backup data storage should not be shared with hard drives that provide storage for the protected data and virtual machines particularly if backup data copy/replication is not used.
-

HPE StoreOnce VSA Backup

- It is recommended that the effect of the resource consumption of the StoreOnce VSA on other virtual applications running on the same pool of resources is assessed. This impact assessment should consider any backup software components, running in virtual machines, which will require resources to execute backup and recovery jobs.

Purchasing information

Product name	Part-number	Description
HPE StoreOnce VSA 4TB LTU	P9L02A	Perpetual StoreOnce VSA 4TB LTU
HPE StoreOnce VSA 4TB E-LTU	P9L02AAE	Perpetual StoreOnce VSA 4TB E-LTU
HPE StoreOnce VSA 4TB 3-year LTU	D4T77A	3 year fixed-term StoreOnce VSA 4TB LTU
HPE StoreOnce VSA 4TB 3-year E-LTU	D4T77AAE	3 year fixed-term StoreOnce VSA 4TB E-LTU
HPE StoreOnce VSA 4TB 5-year LTU	D4U49A	5 year fixed-term StoreOnce VSA 4TB LTU
HPE StoreOnce VSA 4TB 5-year E-LTU	D4U49AAE	5 year fixed-term StoreOnce VSA 4TB E-LTU
HPE StoreOnce VSA 10TB LTU	P9L03A	Perpetual StoreOnce VSA 10TB LTU
HPE StoreOnce VSA 10TB E-LTU	P9L03AAE	Perpetual StoreOnce VSA 10TB E-LTU
HPE StoreOnce VSA 10TB 3-year LTU	TC458A	3 year fixed-term StoreOnce VSA 10TB LTU
HPE StoreOnce VSA 10TB 3-year E-LTU	TC458AAE	3 year fixed-term StoreOnce VSA 10TB E-LTU
HPE StoreOnce VSA 10TB 5-year LTU	D4U62A	5 year fixed-term StoreOnce VSA 10TB LTU
HPE StoreOnce VSA 10TB 5-year E-LTU	D4U62AAE	5 year fixed-term StoreOnce VSA 10TB E-LTU
HPE StoreOnce VSA 4TB to 10TB Capacity Upgrade LTU	P9L06A	Perpetual StoreOnce VSA 4TB to 10TB Capacity Upgrade LTU
HPE StoreOnce VSA 4TB to 10TB Capacity Upgrade E-LTU	P9L06AAE	Perpetual StoreOnce VSA 4TB to 10TB Capacity Upgrade E-LTU
HPE StoreOnce VSA Upgrade 4TB to 10TB 3-year LTU	D4U56A	3 year fixed-term VSA Upgrade 4TB to 10TB LTU
HPE StoreOnce VSA Upgrade 4TB to 10TB 3-year E-LTU	D4U56AAE	3 year fixed-term VSA Upgrade 4TB to 10TB E-LTU
HPE StoreOnce VSA Upgrade 4TB to 10TB 5-year LTU	D4U58A	5 year fixed-term VSA Upgrade 4TB to 10TB LTU
HPE StoreOnce VSA Upgrade 4TB to 10TB 5-year E-LTU	D4U58AAE	5 year fixed-term VSA Upgrade 4TB to 10TB E-LTU
HPE StoreOnce VSA 20TB LTU	P9L04A	Perpetual StoreOnce VSA 20TB LTU
HPE StoreOnce VSA 20TB E-LTU	P9L04AAE	Perpetual StoreOnce VSA 20TB E-LTU
HPE StoreOnce VSA 10TB to 20TB Capacity Upgrade LTU	P9L07A	Perpetual StoreOnce VSA 10TB to 20TB Capacity Upgrade LTU
HPE StoreOnce VSA 10TB to 20TB Capacity Upgrade E-LTU	P9L07AAE	Perpetual StoreOnce VSA 10TB to 20TB Capacity Upgrade E-LTU
HPE StoreOnce VSA 50TB LTU	P9L05A	Perpetual StoreOnce VSA 50TB LTU
HPE StoreOnce VSA 50TB E-LTU	P9L05AAE	Perpetual StoreOnce VSA 50TB E-LTU
HPE StoreOnce VSA 50TB 3-year LTU	D4U47A	3 year fixed-term StoreOnce VSA 50TB LTU
HPE StoreOnce VSA 50TB 3-year E-LTU	D4U47AAE	3 year fixed-term StoreOnce VSA 50TB E-LTU
HPE StoreOnce VSA 50TB 5-year LTU	D4U48A	5 year fixed-term StoreOnce VSA 50TB LTU
HPE StoreOnce VSA 50TB 5-year E-LTU	D4U48AAE	5 year fixed-term StoreOnce VSA 50TB E-LTU
HPE StoreOnce VSA Upgrade 10TB to 50TB 3-year LTU	D4U57A	3 year fixed-term VSA upgrade 10TB to 50TB LTU
HPE StoreOnce VSA Upgrade 10TB to 50TB 3-year E-LTU	D4U57AAE	3 year fixed-term VSA upgrade 10TB to 50TB E-LTU

HPE StoreOnce VSA Backup

HPE StoreOnce VSA Upgrade 10TB to 50TB 5-year LTU	D4U59A	5 year fixed-term StoreOnce VSA UPG 10TB to 50TB LTU
HPE StoreOnce VSA Upgrade 10TB to 50TB 5-year LTU	D4U59AAE	5 year fixed-term StoreOnce VSA UPG 10TB to 50TB E-LTU
HPE StoreOnce VSA 20TB to 50TB Capacity Upgrade LTU	P9L08A	Perpetual StoreOnce VSA 20TB to 50TB Capacity Upgrade LTU
HPE StoreOnce VSA 20TB to 50TB Capacity Upgrade E-LTU	P9L08AAE	Perpetual StoreOnce VSA 20TB to 50TB Capacity Upgrade E-LTU

Licensing notes

- All products ending in AAE (xxxxxAAE) are for eDelivery. These are delivered via an email that will contain a link to download the software and the Entitlement Order Number (EON) that is used to acquire the license key.
- All products ending in A (xxxxxA) are for physical delivery. Delivery takes several days. A paper letter is delivered with a link to download the software and the license key Entitlement Order Number (EON) that is used to acquire the license key. A DVD is also delivered containing the software.
- The StoreOnce VSA is fully functional from its first installation with a 60-day instant-on period. If no license key is added within 60 days of start up all backup targets become read-only. Once a license key is added full functionality is returned.
  - **Reminder:** During the 60 day instant on period up to 50 TB of capacity can be configured. Once configured, capacity cannot be removed from the StoreOnce VSA, To continue using the VSA beyond the 60 day instant on period, the license is added (50, 20, 10, 4 TB or 1 TB freeware) must be greater than the configured capacity.
- The StoreOnce VSA license enables use as a replication target and does not require an additional Replication license. If you intend to replicate to VTL and/or NAS targets on StoreOnce purpose built appliances a Replication license will need to be installed on the target appliance.
- The StoreOnce VSA license enables creation of Catalyst Stores and execution of Catalyst Copy operations and does not require an additional Catalyst license. If you intend to use Catalyst Copy between a StoreOnce VSA and a purpose built StoreOnce appliance, the purpose built StoreOnce appliance will need a Catalyst license installed.
- The StoreOnce VSA license enables users to create Catalyst Stores and act as a replication target, configuration of the Catalyst Stores and Replication Targets is covered in the following configuration services.
  - Data Replication Service: http://dccappshares01.austin.hpe.com/SALES_LIBRARY-PRO/CONCENTRA/Autofed%20Content/UCM/UCM-Concentra/Pub/ucm4AA4-3945ENW/4AA4-3945ENW.pdf
  - Catalyst Solution service: http://dccappshares01.austin.hpe.com/SALES_LIBRARY-PRO/CONCENTRA/Autofed%20Content/UCM/UCM-Concentra/Pub/ucm4AA4-4489ENW/4AA4-4489ENW.pdf
- The StoreOnce VSA license enables data at rest encryption, data in flight encryption and secure erase and does not require a Security Pack license.
- Licenses are purchased with a 3 year, 5 year fixed or perpetual term. For term based (3 or 5 years) licenses, the fixed-term can be extended by the addition of another term based license or a perpetual license.

NOTE: A license to extend a current fixed-term can only be activated less than 180 days from the end of the current license term. A check for the time left on the current license is made at time of

HPE StoreOnce VSA Backup

activation, not at time of purchase. If you attempt to activate a license for a StoreOnce VSA with more than 180 days of the existing license left to run, the activation will fail.

- A license to extend an existing fixed-term must match the capacity of the existing base license. If you attempt to activate a license for an already licensed StoreOnce VSA that has a non-matching capacity license the activation will fail.
- The fixed-term starts from the day the license is redeemed from the Hewlett Packard Enterprise licensing portal not the day the license is added to the StoreOnce VSA.
- For more information on extending the fixed-term see the StoreOnce VSA Deployment and Configuration Guide

- A capacity upgrade license can be added only if there is a valid license installed on the StoreOnce VSA.
    - For example, a 4 TB to 10 TB capacity upgrade license can be applied only if a 4 TB base license is installed on the StoreOnce VSA.
    - For example, a 10 TB to 50TB capacity upgrade license can be applied only if a 10 TB base license is installed on the StoreOnce VSA.
- There is no license to upgrade directly from 4 TB to 50 TB. This is accomplished by upgrading first to 10 TB, then to 20 TB, then 50 TB.
- Once the capacity upgrade license is added, the licensed term of the StoreOnce VSA will be perpetual, 3 or 5 years, depending on license purchased, regardless of the remaining term of the previous smaller capacity license.
- If a fixed term license reaches the end of its term all backup targets become read-only. Once a valid license key is added full functionality is returned.
- For more information on adding capacity expansion licenses see the StoreOnce VSA Deployment and Configuration Guide

Further Considerations for Perpetual Licenses
- Perpetual licenses are only supported with StoreOnce VSAs running 3.13.3 or newer software.
- Foundation support is included for 3 years. Support services are available to purchase to extend this support to 4 or 5 years and to upgrade the support coverage and response level.

HPE StoreOnce 3100 System

HPE StoreOnce 3100 delivers entry-level disk-based backup and disaster recovery that's ideal for smaller remote or branch offices and data centers. This 1U Backup system offers 5.5 TB of usable capacity (8 TB RAW) and speeds of up to 6.4 TB/hour* with StoreOnce Catalyst.

Overview Product Specifications

	StoreOnce 3100
Form Factor	1U Rack
Total capacity (raw)	8 TB
Total capacity (usable***)	5.5 TB
Write performance (max)	1.6 TB/hour
Catalyst performance (max)	6.4 TB/hour
Max fan-in/backup targets	8

See Detailed Technical Specifications and Physical Dimensions later in this document for more details.

NOTE:

*Actual performance is dependent upon: configuration, data set type, compression levels, number of data streams, number of devices emulated, and number of concurrent tasks such as housekeeping or replication and storage configuration.

***Actual usable capacity for customer data storage is dependent upon drive formatting, log file and meta data size, housekeeping backlog.

Compatibility:

Hewlett Packard Enterprise extensive compatibility testing program assures that your HPE Systems work with leading servers, operating systems, and backup applications, including those not manufactured by Hewlett Packard Enterprise.

Compatibility details on specific servers and the latest hardware compatibility information, can be found HERE

Warranty

Hewlett-Packard Enterprise provides a 1 year parts exchange, 1 year labor, 1 year on site, normal business hours, next business day response for StoreOnce 3100, StoreOnce 3520, StoreOnce 3540, StoreOnce 5100, StoreOnce 5500 and StoreOnce 6600 systems, plus 9x5 phone support for the duration of the warranty.

Recommended Support Services:

HPE StoreOnce Systems

Optimized Care   HPE Proactive Care with 6 hour call-to-repair commitment, three year Support Service
HPE Proactive Care gives customers an enhanced call experience plus helps prevent problems and maintains IT stability by utilizing tailored, proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our highest level of hardware support - HPE's 24x7, six hour hardware call-to-repair. HPE is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable storage systems.
http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf

Standard Care   HPE Proactive Care with 24x7 coverage, three year Support Service
HPE Proactive Care gives customers an enhanced call experience plus helps preventing problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem.
http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf

Basic Care   HPE Foundation Care 24x7, three-year Support Service
HPE Foundation Care 24x7 gives you access to HPE 24 hours a day, seven days a week for assistance on resolving issues. This service includes need based Hardware onsite response within four hours. Simplify your support experience and make HPE your first call to help resolve hardware or software problems.
https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en

Purchasing information:

Also refer to Software Options

Product name	Part-number	Description	Includes

HPE StoreOnce 3100 8 TB System	BB913A	HPE StoreOnce 3100 System with 8 TB of RAW disk storage	• HPE 3100 system
			• (4x 2 TB Hot swap hard drives)
			• Easy Install Rail Kit
			• EAC Card
			• Accessory Kit featuring:
			  o Important Card
			  o Start Here Poster
			  o Ethernet cable(Cat 5e) 3m (x2)
			Power cable (IEC 320 C13 Connector for Rack PDU)

HPE StoreOnce 3520 System

HPE StoreOnce Systems

HPE StoreOnce 3520 delivers scalable backup and restore for small to midsized data centers, and provides an ideal replication target device for up to 24 remote and branch offices. This scalable 2U appliance offers from 7.5 to 15.5 TB* of usable capacity (12-24 TB RAW) using an upgrade license, and provides a solution to shrinking backup windows with speeds of up to 12.7 TB/hour* using HPE StoreOnce Catalyst.

Overview Product Specifications

	StoreOnce 3520
Form Factor	2U Scalable Rack
Total capacity (raw)	Up to 24 TB
Total capacity (usable*)	Up to 15.5 TB
Write performance (max*)	4.6 TB/hour
Catalyst performance (max*)	12.7 TB/hour
Max fan-in/backup targets	24

See Detailed Technical Specifications and Physical Dimensions later in this document for more details.

NOTE *Actual performance is dependent upon configuration, data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration.

Scalability:

Start out with the HPE StoreOnce base unit at 2U with 12 TB of RAW capacity (7.5 TB usable*). When you're ready, simply purchase a capacity upgrade license to increase available capacity to a total of 24TB RAW (15.5 TB usable*).

NOTE: The StoreOnce 3520 comes fully populated with 12x 2 TB disks. However, initial working capacity is 12 TB RAW, a capacity upgrade license is required to activate the additional disk capacity.

Compatibility:

Hewlett Packard Enterprise extensive compatibility testing program ensures that StoreOnce systems work with leading servers, operating systems, and backup applications, including those not manufactured by HPE. Compatibility details on specific servers and the latest hardware compatibility information, can be found HERE

Configuration **NOTES:**

- HPE StoreOnce 3520 systems can be connected to the servers they protect via 1 GB Ethernet as well as 10 GbE Ethernet and 8 Gb Fibre Channel when the appropriate optional hardware is installed.
- They are supported on all 10 Gb Ethernet network interface cards (NICs) and switches, dependent on product. 1Gb Ethernet network connections are also supported for sites without 10 Gb Ethernet networks (with reduced performance)
- HPE StoreOnce systems are also supported on 100 base-T Ethernet networks, for connection for the Web GUI and CLI access, such as a management network in a Data Centre.
- This product is not supported on networks using slower Ethernet technology

Warranty

Hewlett-Packard Enterprise provides a 1-year parts exchange, 1-year labor, 1-year on site, normal business

HPE StoreOnce Systems

hours, next business day response for: StoreOnce 3100, StoreOnce 3520, StoreOnce 3540, StoreOnce 5100, StoreOnce 5500, and StoreOnce 6600 systems, plus 9x5 phone support for the duration of the warranty.

Recommended Support Services:

Optimized Care	**HPE Proactive Care with 6 hour call-to-repair commitment, three year Support Service** HPE Proactive Care gives customers an enhanced call experience plus helps prevent problems and maintains IT stability by utilizing tailored, proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our highest level of hardware support - HPE's 24x7, six hour hardware call-to-repair. HPE is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable storage systems. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
Standard Care	**HPE Proactive Care with 24x7 coverage, three year Support Service** HPE Proactive Care gives customers an enhanced call experience plus helps preventing problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
Basic Care	**HPE Foundation Care 24x7, three-year Support Service** HPE Foundation Care 24x7 gives you access to HPE 24 hours a day, seven days a week for assistance on resolving issues. This service includes need based Hardware onsite response within four hours. Simplify your support experience and make HPE your first call to help resolve hardware or software problems. https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en

Purchasing information:

Product name	Part-number	Description	Includes

HPE StoreOnce 3520 12 TB System	BB922A	HPE StoreOnce 3520 System with 24 TB of RAW disk storage	• HPE StoreOnce 3520 System (12 x 2 TB disks)
			• Easy Install Rail Kit
			• EAC Card
			• Accessory Kit featuring:
			  – Important Card
			  – Start Here Poster
			  – Ethernet cable(Cat 5e) 3m (x2)
			  – Power cable (IEC 320 C13 Connector for Rack PDU)

HPE StoreOnce 3520 12 TB Capacity Upgrade LTU/E-LTU	BB944A/AAE	StoreOnce 3520 12 TB Capacity Upgrade LTU/E-LTU	• Entitlement certificate

Also refer to Software Options to add licenses for:
- HPE StoreOnce Replication
- HPE StoreOnce Catalyst

HPE StoreOnce Systems

- HPE StoreOnce Enterprise Manager
- HPE StoreOnce Security Pack

Also refer to Network/Chanel cards:

HPE StoreOnce 10 GbE Network Card

HPE StoreOnce 10 GbE-T Network Card

HPE StoreOnce 8 Gb Fibre Channel Card

NOTE: A total number of 4 in any combination can be used.

HPE StoreOnce 3540 Systems

HPE StoreOnce 3540 delivers scalable backup, restore and data retention with seamless integration into midsized data centers, as well as an ideal replication target device for up to 24 remote and branch offices. This scalable 2U appliance offers from 16 to 31.5 TB of usable* capacity (24 to 48 TB RAW), using a simple and cost effective capacity upgrade and provides a solution to shrinking backup windows with speeds of up to 12.7 TB/hour* using HPE StoreOnce Catalyst.

Overview Product Specifications

	StoreOnce 3540
Form Factor	2U Scalable Rack
Total capacity (raw)	Up to 48 TB
Total capacity (usable*)	Up to 31.5 TB
Write performance (max*)	4.6 TB/hour
Catalyst performance (max*)	12.7 TB/hour
Max fan-in/backup targets	24

See Detailed Technical Specifications and Physical Dimensions later in this document for more details.

NOTE :*Actual performance is dependent upon configuration, data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration. Actual usable capacity for customer data storage is dependent upon drive formatting, log file and meta data size, housekeeping backlog.

Scalability:

Start out with the HPE StoreOnce base unit at 2U with 24 TB of RAW capacity (15.5 TB usable*). When you're ready, simply purchase a capacity upgrade license to increase available capacity to a total of 48 TB RAW (31.5 TB usable*).

NOTE: The StoreOnce 3540 comes fully populated with 12x 4 TB disks. However, initial working capacity is 24 TB RAW, a capacity upgrade license is required to activate the additional disk capacity.

Compatibility:

Hewlett Packard Enterprise extensive compatibility testing program ensures that StoreOnce systems work with leading servers, operating systems, and backup applications, including those not manufactured by HPE.

Compatibility details on specific servers and the latest hardware compatibility information, can be found HERE

Configuration **NOTES:**

- HPE StoreOnce 3540 systems can be connected to the servers they protect via 1 Gb Ethernet as well as 10 GbE Ethernet and 8 Gb Fibre Channel when the appropriate optional hardware is installed.
- They are supported on all 10 Gb Ethernet network interface cards (NICs) and switches, dependent on product.
  1 Gb Ethernet network connections are also supported for sites without 10 Gb Ethernet networks (with reduced performance)
- HPE StoreOnce Backup systems are also supported on 100 base-T Ethernet networks, for connection for the Web GUI and CLI access, such as a management network in a Data Centre.
- This product is not supported on networks using slower Ethernet technology

Warranty

Hewlett-Packard Enterprise provides a 1-year parts exchange, 1-year labor, 1-year on site, normal business hours, next business day response for: StoreOnce 3100, StoreOnce 3520, StoreOnce 3540, StoreOnce 5100, StoreOnce 5500, and StoreOnce 6600 systems, plus 9x5 phone support for the duration of the warranty.

Recommended Support Services:

Optimized Care	**HPE Proactive Care with 6 hour call-to-repair commitment, three year Support Service** HPE Proactive Care gives customers an enhanced call experience plus helps prevent problems and maintains IT stability by utilizing tailored, proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our highest level of hardware support - HPE's 24x7, six hour hardware call-to-repair. HPE is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable storage systems. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
Standard Care	**HPE Proactive Care with 24x7 coverage, three year Support Service** HPE Proactive Care gives customers an enhanced call experience plus helps preventing problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
Basic Care	**HPE Foundation Care 24x7, three-year Support Service** HPE Foundation Care 24x7 gives you access to HPE 24 hours a day, seven days a week for assistance on resolving issues. This service includes need based Hardware onsite response within four hours. Simplify your support experience and make HPE your first call to help resolve hardware or software problems. https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA4-8876ENW&cc=us&lc=en

Purchasing information:

HPE StoreOnce Systems

Product name	Part-number	Description	Includes

HPE StoreOnce 3540 24 TB System	BB914A	HPE StoreOnce 3540 System with 24 TB of RAW disk storage	• HPE StoreOnce 3540 System (12 x 4 TB disks)
			• Easy Install Rail Kit
			• EAC Card
			• Accessory Kit featuring:
			    - Important Card
			    - Start Here Poster
			    - Ethernet cable(Cat 5e) 3m (x2)
			    - Power cable (IEC 320 C13 Connector for Rack PDU)

HPE StoreOnce 3540 24 TB Capacity Upgrade LTU/E-LTU	BB943A/AAE	StoreOnce 3540 24 TB Capacity Upgrade LTU/E-LTU	• Entitlement certificate

Also refer to Software Options to add licenses for:
- HPE StoreOnce Replication
- HPE StoreOnce Catalyst
- HPE StoreOnce Enterprise Manager
- HPE StoreOnce Security Pack

Also refer to Network/Channel Cards
- HPE StoreOnce 10 GbE Network Card
- HPE StoreOnce 10 GbE-T Network Card
- HPE StoreOnce 8 Gb Fibre Channel Card

NOTE: A total number of 4 in any combination can be used.

HPE StoreOnce 5100 Systems

HPE StoreOnce 5100 delivers cost-effective, scalable disk-based backup with deduplication for longer term on-site data retention and off-site disaster recovery for midrange to enterprise data centers. It also provides an ideal replication target device for up to 24 remote or branch offices. This highly scalable 2U to 12U appliance offers from 36 TB to 216 TB* of usable capacity (48 TB to 288 TB RAW) and combats shrinking backup windows with speeds of up to 26.7 TB/hour* with HPE StoreOnce Catalyst for protection of over 106.8 TB* of data in a 4-hour window

Overview Product Specifications

	StoreOnce 5100
Form Factor	2U Scalable Rack
Total capacity (raw)	Up 288 TB
Total capacity* (usable)	Up to 216 TB
Write performance* (max)	13.8 TB/hour
Catalyst performance* (max)	26.7 TB/hour
Max fan-in/backup targets	24

See Detailed Technical Specifications and Physical Dimensions later in this document for more details.

HPE StoreOnce Systems

*Actual performance is dependent upon configuration, data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration. Actual usable capacity for customer data storage is dependent upon drive formatting, log file and meta data size, housekeeping backlog.

Scalability:

Start out with the HPE StoreOnce base unit at 2U with 48 TB RAW (36 TB usable) capacity. When you're ready, simply purchase up to 5 additional shelves using the corresponding storage expansion/capacity upgrade kit for up to 288 TB RAW (216 TB) of total usable storage. A fully configured StoreOnce 5100 is 12U.

Compatibility:

Hewlett Packard Enterprise extensive compatibility testing program ensures that StoreOnce systems work with leading servers, operating systems, and backup applications, including those not manufactured by HPE.

Compatibility details on specific servers and the latest hardware compatibility information, can be found HERE

Configuration NOTES:

- HPE StoreOnce 5100 systems can be connected to the servers they protect via 1 Gb Ethernet as well as 10 GbE Ethernet and 8 Gb Fibre Channel when the appropriate optional hardware is installed.
- They are supported on all 10 Gb Ethernet network interface cards (NICs) and switches, dependent on product. 1 Gb Ethernet network connections are also supported for sites without 10Gb Ethernet networks (with reduced performance)
- HPE StoreOnce Backup systems are also supported on 100 base-T Ethernet networks, for connection for the Web GUI and CLI access, such as a management network in a Data Centre.
- This product is not supported on networks using slower Ethernet technology.

Warranty

Hewlett-Packard Enterprise provides a 1-year parts exchange, 1-year labor, 1-year on site, normal business hours, next business day response for: StoreOnce 3100, StoreOnce 3520, StoreOnce 3540, StoreOnce 5100 StoreOnce 5500 and StoreOnce 6600 systems, plus 9x5 phone support for the duration of the warranty.

Recommended Support Services:

Optimized Care	**HPE Proactive Care Advanced - 24x7 coverage, three year Support Service + 70 service credits for 1st year**
	This services helps achieve a higher return on your product investment with personalized support from a local assigned Account Support Manager who will share best practice advice and personalized recommendations designed to help improve availability and performance to increase stability and reduce unplanned downtime. Leverage your system's ability to connect to HPE for pre-failure alerts, automatic call logging and parts dispatch. For business critical incidents, this service offers critical event management to reduce mean time to resolution. This recommendation provides 24x7 coverage with four-hour response for hardware and collaborative support that offers two-hour callback for supported software issues. Collaborative software management is included with independent software vendors unless you have your software support from HPE where we own all cases from start through to resolution. https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA5-3259ENW&cc=us&lc=en

HPE StoreOnce Systems

Standard Care	**HPE Proactive Care with 24x7 coverage, three year Support Service + 80 services credits for 1st year**
	HPE Proactive Care gives customers an enhanced call experience plus helps preventing problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
Basic Care	**HPE Proactive Care with 24x7 coverage, three year Support Service + 80 services credits per year**
	HPE Proactive Care gives customers an enhanced call experience plus helps preventing problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
HPE Support Service Credits	Service Credits offer flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

Purchasing information:

Product name	Part-number	Description	Includes

HPE StoreOnce 5100 48 TB System	BB915A	HPE StoreOnce 5100 with 48 TB of RAW disk storage	HPE 5100 System (includes 12 x 4 TB disks for data storage and 2 x 900 GB SAS disks for OS)
			Easy Install Rail Kit
			EAC Card
			Accessory Kit featuring:
			   – Important Card
			   – Start Here Poster
			   – Ethernet cable(Cat 5e) 3m (x2)
			   – Power cable (IEC 320 C13 Connector for Rack PDU)

HPE StoreOnce 5100 48 TB Capacity Upgrade Kit	BB916A	HPE StoreOnce 5100 48 TB System upgrade kit - a D3650 base enclosure offering additional 48 TB of RAW disk storage	D3650 storage enclosure with 12 x 4 TB disks, redundant power supplies and fan modules. Rack-mounting hardware kit 1m mini-SAS cable + 2m mini-SAS cable Two AC power cords and two PDU interconnect cords Entitlement certificate Installation instructions

Also refer to Software Options to add licenses for:
- HPE StoreOnce Replication
- HPE StoreOnce Catalyst
- HPE StoreOnce Enterprise Manager
- HPE StoreOnce Security Pack

HPE StoreOnce Systems

Also refer to Network/Channel Cards
- HPE StoreOnce 10 GbE Network Card
- HPE StoreOnce 10 GbE-T Network Card
- HPE StoreOnce 8 Gb Fibre Channel Card

NOTE: A total number of 4 in any combination can be used.

HPE StoreOnce 5500 Systems

HPE StoreOnce 5500 Systems

HPE StoreOnce 5500 offers disk-based backup with deduplication for longer term on-site data retention and off-site disaster recovery with best-in-class scalability and performance, and seamless integration for larger midsize and enterprise data centers. It also provides an ideal replication target device for up to 50 remote or branch offices. This highly scalable 7U to 12U appliance delivers from 36 TB to 864 TB* of usable capacity (60 to 1120 TB RAW), and easily tackles shrinking backup windows with up to 37.7 TB/hour* using HPE StoreOnce Catalyst for protection of 150 TBs* of data in a 4-hour window.

Overview Product Specifications

	StoreOnce 5500
Form Factor	7 to 22U Scalable Rack (plus 1U support shelf- not shown)
Total capacity (raw)	Up 1120 TB
Total capacity (usable***)	Up to 864 TB
Write performance (max)	20.4 TB/hour
Catalyst performance (max)	37.7 TB/hour
Max fan-in/backup targets	50

See Detailed Technical Specifications and Physical Dimensions later in this document for more details.

*Actual performance is dependent upon configuration, data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration. Actual usable capacity for customer data storage is dependent upon drive formatting, log file and meta data size, housekeeping backlog.

Scalability

Start out with the 7U HPE StoreOnce base unit with 60 TB RAW (36 TB usable*) capacity. When you're ready, simply purchase up to 5x 44 TB (36 TB usable*) capacity upgrade kits to complete the first two storage enclosures for up to
280 TB RAW (216 TB usable*).

If more storage is needed, simply purchase additional expansion kits 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 storage enclosures. A total of 3 additional storage enclosures can be added for a total capacity of up to 1120 TB RAW (864 TB usable*). Note that fully expanded the HP StoreOnce 5500 includes 8 enclosures of disk (2 enclosures in each unit). A fully configured HP StoreOnce 5500 is 22U (or 39.3 TB usable capacity* per U in terms of density).

Compatibility:

HPE StoreOnce 5500 Systems

Hewlett Packard Enterprise extensive compatibility testing program assures that StoreOnce systems work with leading servers, operating systems, and backup applications, including those not manufactured by HPE. Compatibility details on specific servers and the latest hardware compatibility information, can be found <u>HERE</u>

Configuration **NOTES:**
- The StoreOnce 5500 can only be installed in racks which provide a distance from the front mounting-rail of the rack to the rear rack-face (the vertical rack surface onto which the rear doors close, the depth of the doors themselves should not be included) of at least 920mm to allow sufficient clearance at the rear for cabling and to allow the hot-swapping of fan modules, PSU modules and I/O modules. Additionally, 35mm of space is required between the front mounting-rail and the nearest point on the inside surface of the front door of the rack to provide sufficient space for the front panels of the system components when the front door is closed.
- HPE StoreOnce 5500 systems can be connected to the servers they protect via a 10 Gb Ethernet, 8Gb or 16Gb Fibre Channel hardware options.
- They are supported on all 10 Gb Ethernet network interface cards (NICs) and switches when configured with the 10Gb Ethernet hardware option. Default 1Gb base-T Ethernet network connections are also supported for sites without 10Gb Ethernet networks (with reduced performance)
- HPE StoreOnce Backup systems are also supported on 100 base-T Ethernet networks, for connection for the Web GUI and CLI access, such as a management network in a Data Centre.
- This product is not supported on networks using slower Ethernet technology.
- If a second disk enclosure is to be installed, Hewlett Packard Enterprise recommends installing the second disk enclosure below the head server unit. If the second disk enclosure is installed above the head server unit, a 1U support shelf supplied with the disk enclosure, should be installed immediately above the head server unit to protect it from the weight of the disk enclosure.
- **NOTE:** The StoreOnce 5500 systems can support up to four of any combination of the 10GbE SFP+, 8Gb FC and 16Gb FC connectivity hardware options

Warranty

Hewlett-Packard Enterprise provides a 1-year parts exchange, 1-year labor, 1-year on site, normal business hours, next business day response for: StoreOnce 3100, StoreOnce 3520, StoreOnce 3540, StoreOnce 5100, StoreOnce 5500 and StoreOnce 6600 systems, plus 9x5 phone support for the duration of the warranty.

Recommended Support Services:

HPE StoreOnce 5500 Systems

Optimized Care	**HPE Proactive Care Advanced - 24x7 coverage, three year Support Service + 70 service credits for 1st year**
	This services helps achieve a higher return on your product investment with personalized support from a local assigned Account Support Manager who will share best practice advice and personalized recommendations designed to help improve availability and performance to increase stability and reduce unplanned downtime. Leverage your system's ability to connect to HPE for pre-failure alerts, automatic call logging and parts dispatch. For business critical incidents, this service offers critical event management to reduce mean time to resolution. This recommendation provides 24x7 coverage with four-hour response for hardware and collaborative support that offers two-hour callback for supported software issues. Collaborative software management is included with independent software vendors unless you have your software support from HPE where we own all cases from start through to resolution. https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA5-3259ENW&cc=us&lc=en
Standard Care	**HPE Proactive Care with 24x7 coverage, three year Support Service + 80 services credits for 1st year**
	HPE Proactive Care gives customers an enhanced call experience plus helps preventing problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
Basic Care	**HPE Proactive Care with 24x7 coverage, three year Support Service + 10 services credits per year**
	HPE Proactive Care gives customers an enhanced call experience plus helps preventing problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
HPE Support Service Credits	Service Credits offer flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

Purchasing information:

HPE StoreOnce 5500 Systems

Product name	Part-number	Description	Includes
HPE StoreOnce 5500 System	BB917A	HPE StoreOnce 5500 Backup with 60 TB of RAW disk storage	• HPE 5500 Backup (15 x 4 TB disks) • Ethernet cable(Cat 5e) 3m (x2) • 6 x Power cords (with IEC 320 C13 plug for Rack PDU) • SAS cabling included • Installation poster • Documentation is pointed to on the web at HPE.com
HPE StoreOnce 5500 60TB Drawer/Capacity Upgrade Kit	BB933A	HPE 5500 System additional storage enclosure and capacity upgrade ki	• 1 storage enclosure with 15 x 4 TB discs, redundant power supplied and fan modules. • Rack-mounting hardware kit • SAS cabling included • 4 x Power cords (with IEC 320 C13 plug for Rack PDU) • Entitlement certificate • HPE StoreOnce 5500 Capacity Upgrade guide
HPE StoreOnce 5500 44TB Capacity Upgrade Kit	BB941A	HPE 5500 System 44 TB Capacity Upgrade Kit	• 11 x 4 TB disks and entitlement certificate • HPE StoreOnce 5500 Capacity Upgrade guide

Also refer to Software Options to add licenses for:
- HPE StoreOnce Replication
- HPE StoreOnce Catalyst
- HPE StoreOnce Enterprise Manager
- HPE StoreOnce Security Pack

HP StoreOnce 6600 Backup

HPE StoreOnce 6600 System

Shown fully configured with 2 couplet and storage in a 42U rack

HPE StoreOnce 6600 is the disk-based backup and deduplication powerhouse of the enterprise data center, providing industry-leading scalability and performance for cost effective, longer term on site data retention and off site disaster recovery. The highest performance HPE StoreOnce system, this immense scale-out solution offers cost-effective scalability from 72 TB to 1728 TB of usable* capacity (120 to 2240 TB RAW), and blisteringly high aggregate speeds of up to 184 TB/hr* with StoreOnce Catalyst to match enterprise performance requirements and meet ever shrinking backup windows.

Overview Product Specifications

	StoreOnce 6600
Form Factor	Provided in a 42U rack
Total capacity (raw)	Up to 2240 TB
Total capacity (usable*)	Up to 1728 TB
Write performance (max)	151 TB/hour
Catalyst performance (max)	184 TB/hour
Max fan-in/backup targets	384

See Performance Specifications, Detailed Technical Specifications and Physical Dimensions later in this document.

NOTE *Actual performance is dependent upon configuration, data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration. Actual usable capacity for customer data storage is dependent upon drive formatting, log file and meta data size, housekeeping backlog.

Special feature: Highly Resilient

HPE StoreOnce 6600 is designed with no single point of hardware failure. The hardware of the HPE StoreOnce 6600's couplet is resilient to any one component failing. This means the following high availability features:

- Autonomic Restart and node failover
- The front-end controllers (nodes) within a couplet are configured in failover mode so that if one controller fails all critical non-replaceable aspects of that controller are transparently moved to another controller and the failed controller is disabled.

- RAID storage, with RAID6 as the minimum redundancy level (so each RAID set can survive a double disk failure)

HP StoreOnce 6600 Backup

- Dual storage controllers (RAID and JBOD), with cache mirroring between the RAID controllers (so that if a controller fails the data is preserved and is still written to media by the other controller)
- Dual paths to the disk drives
- 8 hot spare drives included within each couplet in the event of a disk failure
- Power failure protection for all caching within the storage
- Dual power supplies, such that the hardware will continue operating at full performance if one power supply is offline.
- Redundant fans, such that the hardware will continue operating at full performance if one fan is offline
- Mirrored system disks in each controller (node) to store the device operating system and software
- Front-end high availability (dual fabric support): each controller will have at least two front-end ports per port type to support the customer's external LAN/SAN fabrics. Thus if any fail there is still full access to every node in the device.
- Hot add additional storage or server nodes without scheduled downtime.
- A single GUI/CLI interface is presented from any one node in the system, if that controller fails then the GUI will automatically move to a different controller whilst still being presented at the same network address.

Scalability

Upgrading with HPE StoreOnce 6600:

- Start out with the HPE StoreOnce 6600 120 TB system consisting of two nodes connected in failover configuration as a couplet. This is delivered pre-integrated into HPE's 42U racks which also contain the necessary networking capabilities for future expansion within the entire rack using an HPE StoreOnce 6600 switch assembly.
- To scale-out in terms of capacity, simply add up to 5 capacity upgrade kits to each couplet. Each upgrade kit comprises 22 disks which are added symmetrically. Each upgrade kit contains 22 x 4 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. Capacity upgrade kits can be added to the couplet while the system is online in order to reduce unnecessary downtime.

  A fully configured couplet with 5 capacity upgrade kits, can be managed as a single file system of up to 560 TB RAW capacity (432 TB usable*), however to optimize performance within a couplet, capacity usage should be balanced across both nodes within a couplet. To scale-out in terms of performance, add in one more HPE StoreOnce 6600 120TB system and again scale up by adding capacity upgrade kits. This gives you a maximum configuration of two fully configured HPE StoreOnce 6600 120 TB 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*) purchase the HPE StoreOnce 6600 120TB Backup 3rd Couplet (contains additional base couplet, switch, cables and pulls in another 42U rack), and populate as before.

NOTE *Actual usable capacity for customer data storage is dependent upon drive formatting, log file and meta data size, housekeeping backlog.

Compatibility:

HP StoreOnce 6600 Backup

Hewlett Packard Enterprise's extensive compatibility testing program assures that StoreOnce systems work with leading servers, operating systems, and backup applications, including those not manufactured by HPE.

Compatibility details on specific servers and the latest hardware compatibility information, can be found <u>HERE</u>

Warranty

Hewlett-Packard Enterprise provides a 1-year parts exchange, 1-year labor, 1-year on site, normal business hours, next business day response for: StoreOnce 3100, StoreOnce 3520 StoreOnce 3540, StoreOnce 5100, StoreOnce 5500 and StoreOnce 6600 systems, plus 9x5 phone support for the duration of the warranty.

Recommended Support Services:

Optimized Care	HPE Proactive Care Advanced - 24x7 coverage, three year Support Service + 70 service credits for 1st year This services helps achieve a higher return on your product investment with personalized support from a local assigned Account Support Manager who will share best practice advice and personalized recommendations designed to help improve availability and performance to increase stability and reduce unplanned downtime. Leverage your system's ability to connect to HPE for pre-failure alerts, automatic call logging and parts dispatch. For business critical incidents, this service offers critical event management to reduce mean time to resolution. This recommendation provides 24x7 coverage with four-hour response for hardware and collaborative support that offers two-hour callback for supported software issues. Collaborative software management is included with independent software vendors unless you have your software support from HPE where we own all cases from start through to resolution. https://www.hpe.com/h20195/V2/GetDocument.aspx?docname=4AA5-3259ENW&cc=us&lc=en
Standard Care	HPE Proactive Care with 24x7 coverage, three year Support Service + 80 services credits for 1st year HPE Proactive Care gives customers an enhanced call experience plus helps preventing problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
Basic Care	HPE Proactive Care with 24x7 coverage, three year Support Service + 10 services credits per year HPE Proactive Care gives customers an enhanced call experience plus helps preventing problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice when your products are connected to HPE. This Service combines three years' proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf
HPE Support Service Credits	Service Credits offer flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while

HP StoreOnce 6600 Backup

proactively responding to your dynamic business.

Purchasing information:

Product name	Part-number	Description	Includes
HPE StoreOnce 6600 120 TB 1st couplet	BB918A	HPE StoreOnce 6600 Backup with 120 TB of RAW disk storage	HPE StoreOnce Couplet consisting of: • 2* HPE 6600 Processing Nodes • 2* HPE 6600 Storage Enclosures (each with 15* 4TB HDDs) • 2* HPE 10GbE Switches • Installed in a HPE 42U rack with all required cabling and PDUs* NOTE *Only certified PDUs available for configuration
HPE StoreOnce 6600 88 TB Capacity Upgrade Kit	BB942A	HPE StoreOnce 6600 88 TB upgrade kit, offering additional 88 TB of RAW disk storage	• 22 * 4 TB HDDs • HPE 6600 88TB Capacity Upgrade License Entitlement Certificate
HPE StoreOnce 6600 120 TB 2nd/4th couplet NOTE: for use in existing StoreOnce 6600 systems only	BB919A	HPE StoreOnce 6600 Backup with 120 TB of RAW disk storage	HPE StoreOnce Couplet consisting of: • 2* HPE 6600 Processing Nodes • 2* HPE 6600 Storage Enclosures (each with 15* 4TB HDDs) • All power and data cabling included* NOTE: *Requires existing BB918A StoreOnce 6600
HPE StoreOnce 6600 120 TB 3rd couplet NOTE: for use in existing StoreOnce 6600 systems only	BB920A	HPE StoreOnce 6600 Backup with 120 TB of RAW disk storage	HPE StoreOnce Couplet consisting of. • 2* HPE 6600 Processing Nodes • 2* HPE 6600 Storage Enclosure (each with 15* 4TB HDDs) • 2* HPE 10GbE Switches • Installed in a HPE 42U rack with all required cabling and PDUs* NOTE *Only certified PDUs available for configuration

Also refer to Software Options

HPE StoreOnce 6600 Detailed Performance Specifications

	StoreOnce 6600 maximum RAW capacity TB			
	1 couplet	2 couplet	3 couplet	4 couplet
Base storage	120	240	360	480
1 * 88 TB expansion kit	208	416	624	832
2 * 88 TB expansion kit	296	592	888	1184
3 * 88 TB expansion kit	384	768	1152	1536

HP StoreOnce 6600 Backup

4 * 88 TB expansion kit	472	944	1416	1888
5 * 88 TB expansion kit	560	1120	1680	2240

NOTE: A maximum of 5 expansion kits can be used per couplet.

StoreOnce 6600 maximum usable* capacity TB

	1 couplet	2 couplet	3 couplet	4 couplet
Base storage	72	144	216	288
1 * 88 TB expansion kit	144	288	432	576
2 * 88 TB expansion kit	216	432	648	864
3 * 88 TB expansion kit	288	576	864	1152
4 * 88 TB expansion kit	360	720	1080	1440
5 * 88 TB expansion kit	432	864	1296	1728

StoreOnce 6600 with Data Deduplication (usable* capacity using data deduplication at 20:1*)

	1 couplet	2 couplet	3 couplet	4 couplet
Base storage	1440	2880	4320	5760
1 * 88 TB expansion kit	2880	5760	8640	11520
2 * 88 TB expansion kit	4320	8640	12960	17280
3 * 88 TB expansion kit	5760	11520	17280	23040
4 * 88 TB expansion kit	7200	14400	21600	28800
5 * 88 TB expansion kit	8640	17280	25920	34560

NOTE: *Actual results of data deduplication will vary with data type, change rates over time and backup methodologies used.

A maximum of 5 expansion kits can be used per couplet.

StoreOnce 6600 Performance* (maximum aggregated data transfer rate using VTL)

	1 couplet	2 couplet	3 couplet	4 couplet
Write Performance	37.8 TB/hr	75.6 TB/hr	113.4 TB/hr	151.2 TB/hr
Read Performance	32.2TB/hr	64.4TB/hr	96.6TB/hr	128.8TB/hr

StoreOnce 6600 with StoreOnce Catalyst Performance* (maximum aggregated data transfer rate using Catalyst)

	1 couplet	2 couplet	3 couplet	4 couplet
Write Performance	46 TB/hr	92 TB/hr	138 TB/hr	184 TB/hr

NOTE: *Actual performance is dependent upon configuration, data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication. Actual usable capacity for customer data storage is dependent upon drive formatting, log file and meta data size, housekeeping backlog.

Configuration **NOTES:**

Sizing the StoreOnce 6600:

- The HPE Storage Sizer tool must be used to correctly size a deduplication and replication enabled system
-

HP StoreOnce 6600 Backup

- To optimize capacity utilization and in accordance with performance requirements, your capacity requirements should be planned following Recommended Configuration Guidelines. Please refer to the latest Concepts and Configuration Guide for more information: http://h20565.www2.hpe.com/portal/site/hpsc/public/psi/manualsResults/?sp4ts.oid=5196525

Rack-configuring the StoreOnce 6600:

- The StoreOnce 6600 is mandatory factory integrated and shipped in a 42U rack
  - It can be re-racked, subject to a number of constraints.
  - Splitting the switch, server and\or storage of a 6600, between racks is not supported.
  - A minimum contiguous space of 18U is required to house a couplet and its associated switches.
  - If a customer does choose to re-rack, then future storage and\or couplet expansion must be taken into account and additional contiguous rack space allowed.
  - Full details of the re-racking constraints and process are available - please ask your sales representative or partner for details.
- To configure the StoreOnce 6600 use the steps below as a guide, but to place actual orders use Watson and CLIC to configure a system.
  - This is especially true for the customers 1st or 3rd 6600 which require mandatory factory express integration of the 6600 couplet and required switch kit into the 42U rack that does not need to be ordered separately, but is automatically added to the order configuration when the associated BB918A or BB920A SKU's are ordered.
  - When wishing to expand an existing system, the customers 2nd or 4th 6600 couplet (BB919A) is not factory integrated and can be ordered without the #OD1 option, as the 1st and 3rd 6600 couplets are already housed in the 42U racks and have been factory integrated with switch kits
- It is NOT possible to order BB919A or BB920A without first ordering BB918A. It is NOT possible to order BB918A without the factory integrated rack (BW904A)
- Option #0D1 must be added to products listed for essential factory integration, i.e. BB918A HPE StoreOnce 6600 120TB 1st couplet and BB920A HPE StoreOnce 6600 120TB 3rd couplet

Factory Integrated Cluster:

	Couplet 1 HPE StoreOnce 6600 120TB 1st Couplet BB918A	Couplet 2 HPE StoreOnce 6600 120TB 2nd/4th couplet BB919A	Couplet 3 HPE StoreOnce 6600 120TB 3rd Couplet BB920A	Couplet 4 HPE StoreOnce 6600 120TB 2nd/4th couplet BB919A
Rack	Automatically added to Config when BB918A ordered		Automatically added to Config when BB920A ordered	
Add capacity	BB942A	BB942A	BB942A	BB942A
Add capacity	BB942A	BB942A	BB942A	BB942A
Add capacity	BB942A	BB942A	BB942A	BB942A
Add capacity	BB942A	BB942A	BB942A	BB942A
Add capacity	BB942A	BB942A	BB942A	BB942A
HPE 6000 StoreOnce Replication License	Qty 1 - EJ026A\AAE	Qty 1 - EJ026A\AAE	Qty 1 - EJ026A\AAE	Qty 1 - EJ026A\AAE
HPE 6000 StoreOnce Encryption License	Qty 1 - BB894A\AAE	Qty 1 - BB894A\AAE	Qty 1 - BB894A\AAE	Qty 1 - BB894A\AAE
HPE 6000 StoreOnce Catalyst License	Qty 1 - BB895A\AAE	Qty 1 - BB895A\AAE	Qty 1 - BB895A\AAE	Qty 1 - BB895A\AAE

NOTE: When ordering BB919A as an individual SKU, no rack or internal network is provided. BB919A is

HP StoreOnce 6600 Backup

designed to be added to either BB918A or BB920A.

Factory Integrated Cluster - Additional Form Factors

	Couplet 1	Couplet 2	Couplet 3	Couplet 4
	HPE StoreOnce 6600 120TB 1st Couplet BB918A		HPE StoreOnce 6600 120TB BB920A	
Couplet	16U	14U	16U	14U
Add capacity	N/A	N/A	N/A	N/A
Add capacity	N/A	N/A	N/A	N/A
Add capacity	N/A	N/A	N/A	N/A
Add capacity	N/A	N/A	N/A	N/A
Add capacity	N/A	N/A	N/A	N/A

NOTE: Capacity additions are housed within the existing Couplet footprint thus require no additional rack space

HPE 642 1075mm Shock Intelligent Series Rack	42U		42U	

Software and Software Options

| HPE StoreOnce Catalyst | HPE StoreOnce Catalyst supports the Hewlett Packard Enterprise converged infrastructure strategy and realizes the vision of seamless movement of deduplicated data across the enterprise. This is enabled by the single, integrated enterprise-wide deduplication algorithm. This means that you can benefit from: |

- Simplified management of data movement from a single pane of glass: tighter integration with your backup application to centrally manage file replication across the enterprise.
- Seamless control across complex environments: supporting a range of flexible configurations that enable the concurrent movement of data from one site to multiple sites, and the ability to cascade data around the enterprise (sometimes referred to as multi-hop).
- Enhance performance: distributed deduplication processing using StoreOnce Catalyst stores on the StoreOnce systems and on multiple servers can optimize loading and utilization of backup hardware, network links and backup servers for faster deduplication and backup performance.
- Faster time to backup to meet shrinking backup windows: up to 184 TB/hour* aggregate throughput.

Note that Catalyst over Fibre Channel provides all the ISV control and source side deduplication benefits of current StoreOnce Catalyst but via your Fibre Channel fabric, meaning that you don't have to invest in additional infrastructure

Federated Catalyst
Federated Catalyst is now available for the StoreOnce multi-node products (HPE StoreOnce 6500, 6600) allowing Catalyst stores to span nodes, simplifying backup management and optimizing available storage in large environments while continuing to provide high resiliency and optimized performance.

NOTE *Actual performance is dependent upon configuration data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration.

HPE StoreOnce Catalyst Ordering Information

HPE StoreOnce Catalyst is available by electronic license for customers of any of the latest StoreOnce systems with a wide range of backup applications via:
https://myenterpriselicense.hpe.com/cwp-ui/auth/login

Model / license for	StoreOnce License/E-LTU	Part number
HPE StoreOnce 6000	E-LTU	BB895AAE
	LTU	BB895A
HPE StoreOnce 49/5500	E-LTU	BB906AAE
	LTU	BB906A
HPE StoreOnce 45/5100	E-LTU	BB888AAE
	LTU	BB888A
HPE StoreOnce 2/3xx0	E-LTU	BB887AAE
	LTU	BB887A

NOTE: HPE StoreOnce VSA license already includes StoreOnce Catalyst. No additional license required.

Software and Software Options

Configuration notes
- A StoreOnce Catalyst license is required for each appliance that will host Catalyst Stores. The license enables backup and copy to Catalyst Stores on the appliance.
- The license is locked to the appliance and cannot be transferred to another appliance.
- There is no need to purchase a replication license when using StoreOnce Catalyst Copy. However, if VTL or NAS replication is configured on the same appliance, a replication license will be required for each target appliance.
- Every StoreOnce system (and 6600 couplet) that uses StoreOnce Catalyst requires a license
- StoreOnce Catalyst also provides seamless control of data movement across the organization and better utilization of servers, network bandwidth.
- StoreOnce Catalyst is supported by:
  - HPE Data Protector (for supported versions see
  - http://www.hpe.com/storage/buracompatibility
  - BridgeHead Software (for supported versions see
  - http://www.hpe.com/storage/buracompatibility
  - Veritas NetBackup (via an HPE OST plug-in) available
  - www.hpe.com/storage/StoreOnce/VERITAS
  - Veritas Backup Exec (via an HPE OST plug-in available
  - http://www.hpe.com/storage/StoreOnce/VERITAS
  - Oracle RMAN (via an HPE plug-in) available from
  - http://www.hpe.com/storage/StoreOnce/OracleRMAN
  - Microsoft SQL Server (via HPE plug-in) available from
  - http://www.hpe.com/storage/storeOnce/SQLServer
  - SAP HANA (via HPE plug-in) available from
        http://www.hpe.com/storage/StoreOnce/SAP

HPE StoreOnce Replication

Hewlett Packard Enterprise data replication feature includes replication bandwidth limiting functionality, constraining the amount of bandwidth being used when replicating data for even more network-efficient replication. Without replication bandwidth limiting, a replication job could use as much bandwidth as is available, potentially making other network activities unresponsive. Replication bandwidth limiting is customer configurable at the appliance level via the graphical user interface and is set as a percentage of the available network bandwidth.

Ordering Information

Hewlett Packard Enterprise delivers replication by license, either as a standalone replication solution, or as part of the HPE StoreOnce Catalyst licensing. With HPE StoreOnce systems, replication is licensed by VTL/NAS target, this means that with one replication license:

Software and Software Options

Model / license for	Max number of targets supported	Replication License/E-LTU	Part number
HPE StoreOnce 6X00	384	E-LTU	EJ026AAE
		LTU	EJ0206A
HPE StoreOnce 49/5500	50	E-LTU	BB905AAE
		LTU	BB905A
HPE StoreOnce 45/5100	24	E-LTU	BB885AAE
		LTU	BB885A
HPE StoreOnce 2/3XX0	8	E-LTU	BB884AAE
		LTU	BB884A

NOTE: HPE StoreOnce VSA license already includes replication. No additional license required.

- Replication licenses enable an appliance to host replication target libraries. (No license is required for appliances which only act as a replication source)
- Licensing is "per appliance" i.e. a single license is required to enable an appliance to host as many replication target libraries as it is capable of.
- The license is locked to the appliance and cannot be transferred to another appliance.
- For the 6600 a separate license is required per couplet (EJ026A or EJ026AAE)
- No license is required for StoreOnce VSA to act as a replication target

HPE Reporting Central and StoreOnce Enterprise Manager

Monitor multiple HPE StoreOnce appliances through a single interface with HPE StoreOnce Reporting Central, a default feature shipped with all HPE StoreOnce Systems within the StoreOnce GUI. Reporting Central provides a rolled up status of up to 20 registered StoreOnce appliances in a single pane of glass and allows drill-down reporting into areas of interest such as deduplication ratio, capacity usage for StoreOnce Catalyst stores, VTL libraries, NAS shares, read/write throughput, replication throughput, stream count, CPU, memory, disk I/O and networking and FC channel utilization. Reports for a desired time frame can be exported to a CSV or PNG format file.

NOTE: Reporting of stream count, CPU, memory, disk I/O and networking and FC channel utilization are only supported on 3100, 3520, 3540, 5100, 5500 and 6600 products

For larger installations HPE StoreOnce Enterprise Manager (SEM) is a centralized management console to analyze up to 400 physical and virtual StoreOnce devices across multiple sites. It provides advanced monitoring, reporting, and forecasting and trend analysis in NAS, VTL, and StoreOnce Catalyst environments and integrates with the StoreOnce GUI for single pane-of-glass management - for both physical appliances and the StoreOnce VSA.

Specifically, SEM provides granular reporting and trends analysis of vital parameters such as disk capacity utilization, deduplication ratios, and performance and helps customers plan ahead by providing forecasts of disk usage and replication duration. SEM can be installed on a separate Windows server management station and contains a full database of statistics that is pulled periodically from each device and allows reporting over a long period. In addition to reporting capacity, performance and device status the tool allows logical groupings of devices with different polices and then allows these virtual groups to be managed independently. Through SEM the user is able to drill down to individual StoreOnce appliances and launch their GUI's to manage them in more depth. All reports and graphs can be exported in CSV or PNG formats for further analysis. Users can also schedule e-mail reports for alerts and notifications, such as when pre-set capacity thresholds are crossed. SEM is supported on 64 bit machines only. StoreOnce Enterprise Manager software is available as a free download from http://www.hp.com/go/StoreOnce/SEM

Software and Software Options

In order to benefit from StoreOnce Enterprise Manager, StoreOnce systems require the latest firmware, which can be obtained via a free firmware upgrade by following the "Support & Drivers" link on http://www.hpe.com/storage/storeonce or by following the "HPE Support & Drivers" link from: http://www.hpe.com

HPE StoreOnce REST API SDK

The StoreOnce REST API SDK provides a well-defined RESTful application programming interface (API) that customers can use for integrating and automating reporting/management capabilities with StoreOnce appliances. The SDK essentially delivers a programming interface for polling StoreOnce systems with reporting queries at a desired granularity, and the information extracted from the appliances can then be integrated with the customer's own reporting tool allowing for considerable flexibility in monitoring large StoreOnce environments. The SDK also allows customers to automate select management tasks such as creating and deleting backup targets (StoreOnce Catalyst stores, VTL libraries, NAS shares) and this capability can be integrated with the customer's own management tools. The StoreOnce SDK can be downloaded at http://h20564.www2.hpe.com/hpsc/doc/public/display?docId=c04608993

HPE StoreOnce Security Package

The HPE StoreOnce Security Package delivers a Data at Rest and Data in Flight encryption solution and secure Data Shredding features for data privacy, confidentiality, and integrity of your critical business data while supporting compliance requirements. These are configurable on a by application or by store basis ensuring that you have maximum control over the data you are protecting.

- HPE StoreOnce Data at Rest encryption feature is a software-based solution which provides protection against unauthorized access to data through a stolen, discarded or replaced disk.
- Encryption occurs after data has been deduplicated and prior to writing the data onto disk
- Encryption is enabled on a per store basis (StoreOnce Catalyst, VTL, and NAS targets)
- Meets compliance needs using industry standard Advanced Encryption Standard (AES)-256 encryption algorithm
- Standard FIPS 140-2 level 1 capable
- It enables the StoreOnce System to request encryption keys from HPE ESKM version 4.0 or greater using KMIP 1.2 protocol or SafeNet's KeySecure key manager using KMIP protocol for centralized encryption key management.
- Local Key Management is included with one key per store and the ability to backup and restore keys
- HPE StoreOnce Data in Flight encryption feature protects against unauthorized access of data being transferred over the wire between devices.
- Data in Flight encryption via IPSec is supported on StoreOnce Catalyst only. Encryption is enabled via the operating system utilizing IPSec. In addition, write performance may be impacted, however performance improvements should be seen after first ingest.
- Works between client and StoreOnce device or between StoreOnce devices
- HPE StoreOnce Secure Erase feature protects against unauthorized recovery of deleted data by allowing customers to securely and permanently shred confidential data.
- Secure Erase can be carried out on all data backed up to a VTL, NAS or StoreOnce Catalyst Store

Software and Software Options

- The HPE StoreOnce Secure Erase feature meets industry standards of NIST SP 800-88
- Secure Erase can erase with 1-pass or multiple random overwrites of 3, 5 or 7 passes

Ordering Information

An HPE StoreOnce Security Pack license is required for each appliance .The StoreOnce Security Pack license for the 6X00 is required per couplet. A 90 day trial license is available. Each license includes HPE StoreOnce Data at Rest, Data in Flight Encryption, Centralized Encryption Key Management and Secure Erase.

Model / license for	Security Pack License/E-LTU	Part number
HPE StoreOnce 6000	E-LTU	BB894AAE
	LTU	BB894A
HPE StoreOnce 49/5500	E-LTU	BB907AAE
	LTU	BB907A
HPE StoreOnce 45/5100	E-LTU	BB892AAE
	LTU	BB892A
HPE StoreOnce 2/3XX0	E-LTU	BB891AAE
	LTU	BB891A

Cabling and other options

HPE 10GbE Connectivity	The following cables are recommended for HPE 10GbE SPF connectivity.	
	NOTE: Optical 10GbE SFPs are included in the StoreOnce 10GbE Network Card kits	
HPE ProCurve 10GbE Connectivity	The following cables are recommended for 10GbE connectivity with HPE ProCurve network switches.	
Direct Attach Copper Cables	HPE X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
	HPE X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
	HPE X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
	HPE X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
	HPE 10G X244 XFP to SFP+ 3m Direct Attach Copper Cable	J9301A
	NOTE: Direct Attach Cable (DAC) must be purchased separately for copper environments.	
Fibre Optic Cables	PremierFlex OM4 FC cables	
	HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
	HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
	HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
	HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
	HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
	HPE Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A
	OM3 FC cables	
	HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
	HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
	HPE LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
	HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
	HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
	HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
	HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A
	NOTE: Fibre transceivers and cables must be purchased separately for Fibre-optic environments. For additional information on 10Gb cable specifications go to: http://www.Hewlett-Packard Enterprise.com/rnd/pdfs/10gig_cabling_technical_brief.pdf	
Fibre Optic Cables	The following cables are available for connectivity with other 10GbE switch environments	

Cabling and other options

	HPE LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
	HPE LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
	HPE LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
	HPE LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
	HPE LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
	HPE LC to LC Multi-mode OM3 2-Fiber 50.0m 1-Pack Fiber Optic Cable	AJ839A

NOTE: Fibre transceivers and cables must be purchased separately for fibre-optic environments.

Power Supply	The following power supply is available for StoreOnce 3100 only	
	HPE 500W Flex Slot Platinum Hot Plug Power Supply Kit	720478-B21

Network/Channel Cards	The following cards are available for StoreOnce 3520, 3540, 5100, 5500 and 6600	
	HPE StoreOnce 10 GbE Network Card	BB926A
	HPE StoreOnce 10 GbE-T Network Card	BB927A
	HPE StoreOnce 8 Gb Fibre Channel Card	BB928A
	HPE StoreOnce 16 Gb Fibre Channel Card	BB929A

NOTE: A total number of four in any combination can be used. These optional hardware cards come with a license that is pre-installed and activated when ordered with the initial product. However, if not ordered at the same time as the base product these licenses will need to be installed and activated.

NOTE: The cards are supplied with the necessary SFPs, with the exception of the 10GbE- T network card. The 10GbE-T card uses RJ45 connectors.

NOTE: The 10GbE Network Card and the 8Gb Fibre Channel Card options are supported on the 3520, 3540, 5100, 5500 and 6600. The 10GbE-T Network Card is only supported on the 3520, 3540, 5100. The 16Gb Fibre Channel Card is only supported on the 5500 and 6600. The 6600 must have the same optional hardware cards installed in all 4 slots per couplet. All couplets in a cluster must also have the same optional hardware cards installed.

Technical Specifications

	StoreOnce VSA 4 TB	StoreOnce VSA 10 TB	StoreOnce VSA 20 TB	StoreOnce VSA 50 TB	StoreOnce 3100	StoreOnce 3520	StoreOnce 3540	StoreOnce 5100	StoreOnce 5500	StoreOnce 6600
Form Factor	Virtual appliance	Virtual appliance	Virtual appliance	Virtual appliance	1U rack	2U rack	2U rack	2 to 12U scalable rack	7 to 22U scalable rack	Provided in 42U 1075mm rack
Total Capacity (RAW)					8 TB	24 TB	48 TB	288 TB	Up to 1120 TB	Up to 2240 TB
Total Capacity (Usable***)	up to 4 TB	up to 10 TB	up to 20 TB/hr	1 to 50 TB	5.5 TB	15.5 TB	31.5 TB	216 TB	Up to 864 TB	Up to 1728 TB
Data retention with deduplication	80 TB	200 TB	400 TB/hr	1000 TB	110 TB	282 TB	573 TB	3360 TB	17 PB	34 PB
Fan-in Max	8	8	8	8	8	24	24	24	50	384
Write Performance	400 GB/hr	800 GB/hr	2.4 TB/hr	2.4 TB/hr	1.6 TB/hr	4.6 TB/hr	4.6 TB/hr	13.8 TB/hr	20.4 TB/hr	151.2 TB/hr
			(max aggregated data transfer rate using VTL)							
Read Performance	225 GB/hr	600 GB/hr	1.8 TB/hr	1.8 TB/hr	1.4 TB/hr	4.1 TB/hr	4.1 TB/hr	14.2 TB/hr	14.8 TB/hr	128.8 TB/hr
			(max aggregated data transfer rate using VTL)							
StoreOnce Catalyst Performance	1 TB/hr	2 TB/hr	6 TB/hr	6 TB/hr	6.4 TB/hr	12.7 TB/hr	12.7 TB/hr	26.7 TB/hr	37.7 TB/hr	184 TB/hr
			(max aggregated data transfer rate)							
Targets for backup applications	Catalyst, VTL, CIFS, NFS					: HPE StoreOnce Catalyst, Virtual Tape Library (VTL) CIF			HPE StoreOnce Catalyst, Virtual Tape Library (VTL) NAS	
Device Interfaces	Up to 2 x 1GbE vNICs	Up to 2 x 1GbE vNICs	2 x 1GbE vNICs (min)	2 x 1GbE vNICs (min)	4 x 1 Gb Ethernet	4 x 1GbE, Up to 8 x 10GbE SFP+ or 10GbE Base-T or 8Gb FC	4 x 1GbE, Up to 8 x 10GbE SFP+ or 10GbE Base-T or 8Gb FC	4 x 1GbE, Up to 8 x 10GbE SFP+ or 10GbE Base-T or 8Gb FC	4 x 1GbE, Up to 8 x 10GbE SFP or 8Gb FC or 16GB FC	8 x 1GbE, 4 x 10GbE SFP+ or 8x 8Gb FC or 8x 16GB FC per couplet
Disk drives	n/a	n/a	n/a	n/a	2 TB, SAS 7200rpm, 3.5-inch	2 TB, SAS 7200rpm, 3.5-inch	4 TB, SAS 7200rpm, 3.5-inch	4 TB, SAS 7200rpm, 3.5-inch	4 TB, SAS 7200rpm, 3.5-inch	4 TB, SAS 7200rpm, 3.5-inch
Number of Disk Drives	n/a	n/a	n/a	n/a	4	12	12	12 to 72 (max)	15 (min), 280 (max)	30 (min), 140 (max) Per Couplet

NOTE: ***Actual usable capacity for customer data storage is dependent upon drive formatting, log file and meta data size, housekeeping backlog.

	StoreOnce VSA 4 TB	StoreOnce VSA 10 TB	StoreOnce VSA 20 TB	StoreOnce VSA 50 TB	StoreOnce 3100	StoreOnce 3520	StoreOnce 3540	StoreOnce 5100	StoreOnce 5500	StoreOnce 6600
RAID Support	n/a	n/a	n/a	n/a	Hardware RAID 5	Hardware RAID 6	Hardware RAID 6	Hardware RAID 6	Hardware RAID 6	Hardware RAID 6

n/a

StoreOnce Catalyst, Virtual Tape Libraries and NAS backup targets combined

Technical Specifications

Max Number of Cartridges Emulated	2048	6144	8192	8192	768	24,576	24,576	32,768	819,200	6,553,600
Power Requirements per power supply • Range input voltage	n/a	n/a	n/a	n/a	100 to 120 VAC 200 to 240 VAC	100 to 120 VAC 200 to 240 VAC	100 to 120 VAC 200 to 240 VAC	100 to 120 VAC 200 to 240 VAC	See table below	See table below
• Rated input frequency	n/a	n/a	n/a	n/a	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz	50 to 60 Hz		
• Rated input current	n/a	n/a	n/a	n/a	x A (at 120VAC) x A (at 240 VAC)	x A (at 120VAC) x A (at 240 VAC)	x A (at 120VAC) x A (at 240 VAC)	x A (at 120VAC) x A (at 240 VAC)		
Heat dissipated BTU	n/a	n/a	n/a	n/a	1979 BTU/hr (at 120 VAC) 1965 BTU/hr (at 240 VAC)	3207 BTU/hr (at 120 VAC) 3112 BTU/hr (at 240 VAC)	3207 BTU/hr (at 120 VAC) 3112 BTU/hr (at 240 VAC)	3207 BTU/hr (at 120 VAC) 3112 BTU/hr (at 240 VAC)	See table below	See table below
Rated steady-state power and max peak power	n/a	n/a	n/a	n/a	500 W (at 100 to 120 VAC) 500 W (at 200 to 240 VAC)	800 W (at 100 to 120 VAC) 800 W (at 200 to 240 VAC)	800 W (at 100 to 120 VAC) 800 W (at 200 to 240 VAC)	800 W (at 100 to 120 VAC) 800 W (at 200 to 240 VAC)		
Idle (disks spinning)	n/a	n/a	n/a	n/a	LWAd 5.5A LpAm 37dBA	LWAd 5.7A LpAm 39dBA	LWAd 5.7A LpAm 39dBA	LWAd 5.7A LpAm 39dBA		
Operating (random seeks to disks)	n/a	n/a	n/a	n/a	LWAd 3.2C LpAm 46dBA	LWAd 5.9C LpAm 31dBA	LWAd 5.9C LpAm 31dBA	LWAd 5.9C LpAm 31dBA		

Power requirements for StoreOnce 5500

Appliance	Qty D6020	HDD	208V A	208V W	208V VA	208V BTU/hr	220V A	220V W	220V VA	220V BTU/hr	240V A	240V W	240V VA	240V BTU/hr
5500 Base	1	15	8	1559	1564	5622	7	1558	1564	5619	7	1559	1566	5620
5500 1 Enc Max	1	70	10	2143	2149	7814	10	2142	2150	7811	9	2142	2153	7812
5500 2 Enc Min	2	85	15	3029	3038	11142	14	3028	3040	11138	13	3029	3044	11139
5500 2 Enc Max	2	140	17	3613	3624	13334	16	3612	3626	13330	15	3612	3630	13331
5500 3 Enc Min	3	155	22	4499	4512	16661	21	4498	4516	16658	19	4499	4521	16659
5500 3 Enc Max	3	210	25	5083	5098	18853	23	5082	5102	18850	21	5082	5107	18851
5500 4 Enc Min	4	225	29	5969	5987	22180	27	5968	5991	22177	25	5969	5998	22178
5500 4 Enc Max	4	280	32	6553	6572	24372	30	6552	6577	24369	27	6552	6585	24370

Technical Specifications

Power requirements for StoreOnce 6600

Appliance	Qty Couplet	HDD	208V A	W	VA	BTU/hr	220V A	W	VA	BTU/hr	240V A	W	VA	BTU/hr
6600 Base 6600 1 Couplet Max	1	30	18	3783	3795	13514	17	3782	3797	13508	1	30	18	3783
6600 2 Couplet Min	1	140	24	4951	4966	17898	23	4949	4969	17892	1	140	24	4951
6600 2 Couplet Max	2	170	39	8002	8027	28914	37	8031	8031	28901	2	170	39	8002
	2	280	44	9170	9198	33298	42	9203	9203	33285	2	280	44	9170

NOTE: First rack and second rack have the same power ratings.

Physical Dimensions

Please refer to refer to the latest Concepts and Configuration Guide for more information:
http://h20565.www2.hpe.com/portal/site/hpsc/public/psi/manualsResults/?sp4ts.oid=5196525

StoreOnce Backup system:		3100	3520	3540	5100	5500	6600120 TB for 1st couplet
	Form factor	1U	2U	2U	2U	7U	42U
Dimensions	Out of box	1.7 x 17.1 x 29.5 inches (4.32 x 43.46 x 75.0 cm)	3.44 x 17.54 x 28.75 in (8.73 x 44.55 x 73.02 cm)	3.44 x 17.54 x 28.75 in (8.73 x 44.55 x 73.02 cm)	3.44 x 17.54 x 28.75 in (8.73 x 44.55 x 73.02 cm)	17.6 x 35.1 x 12.2 in (44.7 x 89.12 x 30.83 cm)	23.54 x 44.30 x 79.00 in (59.78 x 112.52 x 200.66 cm)
	Shipping	10.4 x 38.4 x 24 in (26 x 96 x 60 cm)	10.4 x 38.4 x 24 in (26 x 96 x 60 cm)	10.4 x 38.4 x 24 in (26 x 96 x 60 cm)	10.4 x 38.4 x 24 in (26 x 96 x 60 cm)	24.1 x 43 x 31.9 in (61 x 109 x 81 cm)	35.43 x 50.87 x 85.35 in (90 x 129.20 x 216.80 cm)
Weight	Out of box	37 lb. (16.78kg)	66 lb (30kg)	67.1 lb (30.5kg)	68.2 lb (31kg)	249.28 lb (113 kg)	953 lb (433 kg)
	Shipping	70 lb (31.8 kg)	90 lb (41 kg)	92 lb (42 kg)	93 lb (42.5 kg)	297.62 lb (135 kg)	1162 lb (528 kg)
Environmental	Operating temperature	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed.					

NOTE: System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).

Technical Specifications

Shipping temperature	
Operating humidity	Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity.

StoreOnce Backup Upgrade Kits:		StoreOnce 5100 48 TB Upgrade Kit	StoreOnce 5500 44 TB Drawer/Cap Upgrade Kit	StoreOnce 5500 60 TB Drawer/Cap Upgrade Kit	6600 120 TB for 3rd couplet	6600 120 TB for 2nd/4th couplets	6600 88 TB Capacity Upgrade Kit
	Form factor	2U		5U	42U	14U	N/A
Dimensions	Out of box	3.44" x 17.64" x 23.54" in (8.7 x 44.8 x 59.8 cm)	n/a	17.6 x 35.1 x 8.8 in (44.7 x 89.12 x 22.1 cm)	23.54 x 44.30 x 79.00 in (59.78 x 112.52 x 200.66 cm)	17.6 x 35.1 x 24.3 in (44.7 x 89.12 x 61.66 cm)	N/A
	Shipping	11.13 x 38.12 x 23.75 in (27.8 x 95.3 x 59.3 cm)	35.5 x 23 x 9.5 in /90.2 x 54.4 x 24.1 cm	24.1 x 43 x 21.3 in (61 x 109 x 54 cm)	35.43 x 50.87 x 85.35 in (90 x 129.20 x 216.80 cm)	24.1 x 43 x 63.8 in (61 x 109 x 162 cm)	21.5 x 12.5 x 19.3 in (54.5 x 31.5 x 49 cm)
Weight	Out of box	60 lb (27.2 kg)		198.68 lb (90.31 kg)	953 lb (433 kg)	556.87 lb (253.12 kg)	43.56 lb (19.8 kg)
	Shipping	78lbs (35.38kg)		238.78 lb (108.31 kg)	1162 lb (528 kg)	615.35 lb (279.12 kg)	50.16 lb (22.8 kg)

HPE Support Services and Warranty Information

Protect your business beyond warranty with HPE Support Services
HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability. Our integrated portfolio of Services for storage help customers reduce costs, optimize data, streamline storage management, and improve backup and recovery. HPE Support Services enable you to choose the right service level, length of coverage and response time as you purchase your new storage solution, giving you full entitlement for the support for need for your IT and business.

Connect your devices:
Unlock all of the benefits of your technology investment by connecting your products to HP Enterprise. Achieve up to 77%[1] reduction in down time, near 100%[2] diagnostic accuracy and a single consolidated view of your

Technical Specifications

environment. By connecting, you will receive 24x7monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to HPE support.

1 - IDC

2 - HP CSC reports 2014 - 2015

NOTE: HPE Proactive Care and HPE Proactive Care Advanced require that the customer connect their devices to make the most of these services and receive all the deliverables.

Discover, plan, and design

Choose from a rich portfolio of services to make the most of HPE StoreOnce Storage, so you can efficiently and affordably consolidate, manage, and extract value from unstructured data.
Start here to understand your data protection options. Next, develop a methodical plan and design the optimal HPE StoreOnce Storage solution that addresses your unique technology requirements.
HPE Backup Recovery Impact Analysis - Focus placed on service requirements and design as the key to success for gaining a clear understanding of the role of increasingly diverse data protection strategies.
http://h20195.www2.hpe.com/V2/GetPDF.aspx/4AA4-1175ENW.pdf

Deploy and integrate

Implement HPE StoreOnce Storage correctly-right from the start-so you can count on reduced risk and accelerated deployment, while implementing a best-practice configuration from day one. Then move on to proactively leverage products, tools, and technology to avoid problems and optimize performance. In this way, you get the most out of your HPE StoreOnce Storage investment, as you keep your staff certified through project-based or residency services.

Installation of StoreOnce VSA and all aspects of the Virtual environment and are a customer responsibility. To configure StoreOnce VSA to act as a replication target or to host Catalyst Stores the appropriate service is required. The HPE StoreOnce Data Replication Solution Service is required if the StoreOnce VSA is to act as a replication target. The HPE StoreOnce Catalyst Solution Service is required if the StoreOnce VSA is to host Catalyst Stores and use Catalyst Copies.

HPE StoreOnce Data Replication Solution Service - Three levels of service to deliver the right level of business continuity that enables you to easily manage disaster recovery while providing data replication across distances with HPE StoreOnce Storage. http://h20195.www2.hpe.com/V2/GetPDF.aspx/4AA4-3945ENW.pdf

HPE StoreOnce Catalyst Solution and Startup Service - Configuration of the best possible performance for HPE StoreOnce Catalyst software environments with your choice of three levels of service, based on the complexity of the environment and the level of service desired.
Catalyst Solution Service: http://h20195.www2.hpe.com/V2/GetPDF.aspx/4AA4-4489ENN.pdf
Catalyst single node startup service: http://h20195.www2.hpe.com/v2/GetPDF.aspx/4aa4-9988ENW.pdf

HPE StoreOnce Recovery Manager Central (RMC) Software Installation and Startup Service—Provides deployment of HPE StoreOnce RMC software with features designed to help enable proper installation in the customer's storage environment and increase the benefit from the storage investment
http://h20195.www2.hpe.com/v2/GetPDF.aspx/4aa5-6254ENW.pdf

HPE StoreOnce Health Check - Proactive review of your HPE StoreOnce Storage solution or other HPE

Technical Specifications

deduplication systems, including a review of operational, capacity, and performance data so you can rest assured that everything is operating effectively. http://h20195.www2.hpe.com/V2/GetPDF.aspx/4AA4-3821ENN.pdf

HPE StoreOnce Firmware Analysis and Implementation Service
HPE Firmware Analysis and Update Implementation Services are technical services that provides the analysis and implementation of firmware updates, taking into account the relevant revision dependencies within the IT environment.
http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA4-7728ENW.pdf

HPE Storage Data Migration Services - End-to-end data migration service providing seamless discovery, assessment, planning, and design, completely customizable to your organization's storage area network or network attached storage environment and using innovative software to help you migrate to HPE storage quickly and efficiently.
http://h20195.www2.hpe.com/V2/GetPDF.aspx/4AA3-0774ENW.pdf

Flexible Installation and Startup SKU's and option bands

HPE StoreOnce 6600 System Installation and Startup service

Part	Description	Up to 4-Couplets, Initial Installation Same Site	Add-On Couplet without #0D1 Same Site	Add-On 2 or 3 Couplets with Expansion Rack Same Site	Capacity Upgrade Same Site
		(Quote qty one for each additional site)			
		Service SKU			
BB918A	HPE StoreOnce 6600 120 TB 1st Couplet	HA124A1#5RZ			
BB919A	HPE StoreOnce 6600 120 TB 2nd/4th Couplet		HA124A1#5S0		
BB920A	HPE StoreOnce 6600 120 TB 3rd Couplet			HA124A1#5S1	
BB942A	HPE StoreOnce 6600 88 TB Capacity Upgrade Kit				HA124A1#5S2

HPE StoreOnce 6600 non-Factory integrated FC and Network card installation Service
This service provides the Installation and Startup of one or more non-Factory integrated (non #0D1) FC and Network cards (BB826A, BB828A BB829A) on the same site - HA124A1#5V1

HPE StoreOnce 6600 Rack Transition Service
This service provides for the re-racking of HPE StoreOnce B6200, 6500 and 6600 products into a rack other than originally installed in. Per rack - HA124A1#5UK

Technical Specifications

HPE StoreOnce 3100, 3520, 3540, 5100 and 5500 System Installation and Startup service

Description	Service SKU (*)	Additional StoreOnce system on same site
HPE StoreOnce 3100, 3520, 3540, 5100 and 5500 System	HA124A1#55Q	HA124A1#55R
HPE StoreOnce 5500 system (additional for non #0D1)	HA124A1#5V0	
HPE StoreOnce 5500 capacity upgrade (additional for non #0D1)	HA124A1#5V0	
HPE StoreOnce 5100 Capacity upgrade (non #0D1)	HA113A1#5KK	

NOTE (*) Optional for HPE StoreOnce 3100, 3520, 3540, 5100 and 5500

Advanced start-up services

HPE StoreOnce Catalyst and Replication Solution Service
HPE StoreOnce Catalyst Solution and Replication Solution Services. These are for the HPE StoreOnce 6600 and 5500 systems mandatory service included when the appropriate licenses are ordered. They provide a configuration and verification service in the Customer environment to optimize the benefits of deploying Replication and\or Catalyst functionality. These service are optional for the HPE StoreOnce 3100, 3520, 3540 and 5100 and are available in 3 levels.

Description	Service SKU
HPE StoreOnce Catalyst solution service lvl1	HA124A1#58E
HPE StoreOnce Catalyst solution service lvl2	HA115A1#58F
HPE StoreOnce Catalyst solution service lvl3	HA115A1#58G
HPE StoreOnce Replication solution service lvl1	HA124A1#5TY
HPE StoreOnce Replication solution service lvl2	HA115A1#5TZ
HPE StoreOnce Replication solution service lvl3	HA115A1#5UO

NOTE: One service is required for each site when the appropriate licenses are ordered

HPE StoreOnce single node Catalyst Startup Service for 3100, 3520, 3540, 5100 and 5500
HPE StoreOnce single node Catalyst Startup Service provides implementation and verification of the backup and remote copy features of HP
StoreOnce Catalyst functionality - HA124A1#5T7
NOTE: one service is required for each site when the appropriate licenses are ordered

HPE StoreOnce Recovery Manager Central software installation and startup service
The HPE StoreOnce Recovery Manager Central software installation and startup service provides deployment of the HPE
StoreOnce Recovery Manager Central software, with features designed to both help ensure proper installation in

Technical Specifications

the storage environment and increase the benefit from the storage investment.

Description	Service SKU
HP StoreOnce RMC for 3PAR	HA124A1#5WD
HP StoreOnce RMC-V for 3PAR	HA124A1#5WE
HP StoreOnce RMC-S for 3PAR	HA124A1#5ZB

HPE StoreOnce System Health Check Service
Proactive review of your HPE StoreOnce Storage solution or other HPE deduplication systems, including a review of operational, capacity, and performance data so you can rest assured that everything is operating effectively.

Description	Support Service SKU	Per Event	Contractual
StoreOnce Backup System Health Check Service	HM006A1	HM006AE	HM006AC

HPE StoreOnce Firmware Analysis and Implementation Service
HPE Firmware Analysis and Update Implementation Services are technical services that provides the analysis and implementation of firmware updates, taking into account the relevant revision dependencies within the IT environment.

Description	Support Service SKU	Per Event	Contractual
StoreOnce Firmware update analysis service	HM001A1	HM001AE	HM001AC
StoreOnce Firmware update implementation service	HM002A1	HM002AE	HM002AC

For more information on HPE Services and Support

To learn more on HPE Storage Services, visit: http://www.hpe.com/services/storage

Or contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner
Or take a look at the following resources:
- HPE StoreOnce Replication Solution Service Sales Brief
  http://h20195.www2.hpe.com/V2/GetPDF.aspx/4AA4-4540ENW.pdf
- HPE StoreOnce Replication Solution Service data sheet
  http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA4-3945ENW.pdf
- HPE StoreOnce Catalyst Solution Service Sales Brief http://h20195.www2.hpe.com/V2/GetPDF.aspx/4AA4-4480ENW.pdf
- HPE StoreOnce Catalyst Solution Service data sheet http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA4-4489ENW.pdf
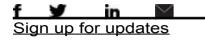
Summary of Changes

Date	Version History	Action	Description of Change
27-May-2016	From Version 14 to 15	Changed	Changes made to cover new perpetual StoreOnce VSA LTUs and the added 20 TB LTU. Clean up HP ╪ HPE. Cleaned up units e.g. 20TB ╪ 20 TB (for consistency).
25-Apr-2016	From Version 13 to 14	Changed	Changes made throughout the entire document
31-Mar-2016	From Version 12 to 13	Changed	Changes made throughout the entire document
17-Dec-2015	From Version 11 to 12	Changed	Fixed some typos from last version.
01-Dec-2015	From Version 10 to 11	Changed	Changes made throughout the entire document
24-Jul-2015	From Version 9 to 10	Changed	Changes made throughout the entire document
19-Jun-2015	From Version 8 to 9	Changed	Changed made to the Storeonce VSA Backup and the Software Options Sections.
8-May-2015	From Version 7 to 8	Changed	Corrected some SKU numbers for the StoreOnce VSA and corrected some URLs
6-Apr-2015	From Version 6 to 7	Changed	Changed the version to 7 to match Product Bulletin.
30-Mar-2015	From Version 5 to 6	Changed	Changes made throughout the entire document
30-Jan-2015	From Version 4 to 5	Changed	Edits made to 4900 support shelf, 6500 what's in the box contents and 'What's new' June '14 date removal
9-Jan-2015	From Version 3 to 4	Changed	Changes to the HPE StoreOnce 6600 purchasing information table
15-Sep-2014	From Version 2 to 3	Changed	Update the firmware version number of the 6500 model.
18-Aug-2014	From Version 1 to 2	Changed	Changes were made throughout the Overview, Technical Specifications, and Software Options Sections. Product Descriptions Updated.

Summary of Changes

f 🐦 in ✉

Sign up for updates

Hewlett Packard Enterprise

c04328820 - 14996 - Worldwide - V15 - 27-May-2016