QuickSpecs

Overview

HPE StoreOnce Systems

Does data growth leave you struggling with complex, distributed, and costly data protection? Is some of your data not being protected because backup windows aren't long enough or backup jobs are failing? Keep pace with HPE StoreOnce Systems; disk-based, deduplicating, backup systems. Use StoreOnce deduplication, available in a range of scalable dedicated appliances and flexible virtual appliances, with your choice of backup and recovery software to deliver robust enterprise-wide data protection. HPE StoreOnce Systems 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. HPE StoreOnce Systems provide automated backup and DR operations with all the features you'd expect from disk backup, together with secure data retention with built-in data encryption for Data at Rest and Data in Flight**.

HPE StoreOnce Catalyst delivers industry-leading backup speeds of up to 139 TB/hr* enabling you to meet shrinking backup windows, plus Federated Deduplication across the enterprise so you choose where to deduplicate data. Federated Catalyst allows Catalyst stores to span nodes simplifying backup management and optimizing available storage in large environments

Choose between powerful dedicated appliances for larger offices and data centers, flexible virtual appliances for highly virtualized or smaller and remote offices and Data Protector software with StoreOnce Federated Deduplication and StoreOnce Catalyst when you don't want to use a dedicated deduplication appliance. With HPE's single StoreOnce deduplication technology, managing the movement of data across the enterprise has never been easier.

Protect data from unauthorized access through Data at Rest encryption, Data in Flight** encryption and secure erase functionality for disks that are lost, stolen or discarded.

Seamlessly integrating with your current backup applications, StoreOnce Backup provides flexible integration into both Fibre Channel (FC) and iSCSI SAN, GbE, 10 GbE or virtualized and other environments. Catalyst over Fibre Channel provides all the ISV control and source side deduplication benefits of current StoreOnce Catalyst but via your Fibre Channel fabric. HPE StoreOnce offers flexible choices for the number and types of connectivity on StoreOnce 3520, 3540 and 5100. Choose the connectivity options, 10 GbE-T, 10 GbE, or 8 GB FC, which makes the most sense for your environment and also, provides flexibility for future growth/changes.

NOTES: 4900 and 6500 have fixed Ethernet and FC connectivity.
*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 StoreOnce Catalyst only. In addition, write performance may be impacted, however performance improvements should be seen after first ingest.

What's New

The HPE StoreOnce Systems family will include:
- A new StoreOnce 3100 system
  - The StoreOnce 3100 delivers a 1U solution with 5.5 TB of usable*** capacity (8 TB RAW)
  - With speeds of up to 6.4 TB/hour* using HPE StoreOnce Catalyst.
- A new StoreOnce 3520 system
  - The StoreOnce 3520 delivers a scalable 2U solution with 7.5 to 15.5 TB of usable*** capacity (12-24 TB RAW)
  - With speeds of up to 12.7 TB/hour* using HPE StoreOnce Catalyst.
- A new StoreOnce 3540 system

Overview

- - The StoreOnce 3540 delivers a scalable 2U solution with 15.5 TB to 31.5 TB of usable*** capacity (24-48 TB RAW)
  - With speeds of up to 12.7 TB/hour** using HPE StoreOnce Catalyst.
- A new StoreOnce 5100 system
  - The StoreOnce 5100 delivers a scalable solution with 36 TB to 216 TB of usable*** capacity (48-288 TB RAW)
  - With speeds of up to 26.7 TB/hour** using HPE StoreOnce Catalyst.

The HPE StoreOnce Backup family features:

- Flexible choice for number and types of connectivity, 10GbE-T, 10GbE, or 8Gb FC, on StoreOnce 3520, 3540 and 5100
  - Customers can choose the connectivity options that makes the most sense for their environment. Also, provides flexibility for future growth/changes
- Initial licenses for StoreOnce 3100, 3520, 3540 and 5100 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
- Gen9 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 and 5100 products

NOTE: Pre-installed licenses not available on StoreOnce 4900 or 6500
***Actual usable capacity for customer data storage is dependent upon drive formatting, log file and Meta data size, housekeeping backlog.

HPE StoreOnce Backup Models

HPE StoreOnce Backup Models

Target deployment	Product options	Usable *** capacity (before dedupe)
Enterprise data center	**HPE StoreOnce 6500**	Scale from 72 to 1728 TB usable ***
	HPE StoreOnce 4900	Scale from 36 to 432 TB usable ***
Mid-size data center or large regional office	**HPE StoreOnce 5100**	Scale from 36 TB to 216 TB usable ***
	HPE StoreOnce 3540	Scale from 15.5TB to 31.5 TB usable***
Small data center or remote office	**HPE StoreOnce 3520**	Scale from 7.5 to 15.5 TB usable ***
	HPE StoreOnce 3100	5.5 TB usable ***
	HPE StoreOnce VSA	4, 10 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. 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
***Actual usable capacity for customer data storage is dependent upon drive formatting, log file and meta data size, housekeeping backlog.

Common Features and Benefits

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.

Choose from dedicated backup appliances to match the capacity and performance requirements of larger offices and data center deployments. For virtualized environments and smaller and remote offices, HPE StoreOnce is also available as a virtual appliance for virtualized data protection that utilizes existing infrastructure.

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 (4900, 6500) or additional nodes (StoreOnce 6500 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 6500 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 HPE StoreOnce high performance multi-streaming capability. Choose Ethernet (to Catalyst, iSCSI VTL or NAS targets) or Fibre Channel (To Catalyst or VTL targets) to integrate into your network environment. Catalyst over Fibre Channel provides all the ISV control and source side deduplication benefits of current StoreOnce Catalyst but via your Fibre Channel fabric.

Consolidate multiple parallel backup streams via standard Ethernet or Fibre Channel network to a single disk-based system to achieve industry-leading aggregate backup speeds of up to 139 TB***** per hour with the top of the range HPE StoreOnce 6500 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 new 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

Common Features and Benefits

housekeeping or replication and storage configuration.

Reducing the time to restore data

Hewlett Packard Enterprise offers industry-leading restore speeds with its StoreOnce product line; up to 119% of ingest performance in the high end appliance. This ensures when you have a system failure you can restore your data in the shortest time possible and minimize downtime

Freeing up your IT resources

HPE StoreOnce Systems allow you to reduce the complexity of your backup environment by consolidating and automating all of your backup processes using a single HPE StoreOnce system, reducing the time spent managing multiple data protection devices and processes, reducing cost and simplifying your data protection environment. What's more, for organizations that have branch and small offices, HPE StoreOnce Backup with supported backup software helps you automatically protect the data at these sites without the need for trained staff, or dedicated hardware if you use StoreOnce VSA, reducing the risk of important data loss.

With HPE StoreOnce Catalyst, movement of deduplicated data across the enterprise is even easier. There's no need to deduplicate and rehydrate at each step, data can be replicated from these sites to a central data center or disaster recovery site in deduplicated form, reducing network bandwidth requirements. 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.

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.

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.

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 StoreOnce 6500 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

Common Features and Benefits

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).

Reducing the risk to Data at Rest and Data in Flight**

With high-profile reports of data loss, and increasing levels of government legislation concerning data security, companies are 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.
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 flexibility with NAS (NFS, CIFS), iSCSI and FC virtual tape libraries (VTL) and StoreOnce Catalyst targets for backup applications. This means that you can easily integrate StoreOnce Backup into your existing IT environment with minimum disruption. Supported by all leading backup applications, this allows each StoreOnce Backup system to be installed and used without additional investment in software.

The HPE StoreOnce systems are easily rack-mounted in standard racks, while the performance leading HPE StoreOnce 6500 is pre-integrated into an HPE 42U rack for efficient use of space in the data center.

Delivering reliable backup and restore

HPE StoreOnce systems can enhance reliability by automating and consolidating backup to reduce operator intervention and consequently user-generated errors.

Hewlett Packard Enterprise understands the need for highly reliable, highly available data protection. Consequently HPE StoreOnce systems feature hardware RAID 6 (RAID 5 on StoreOnce 3100) to reduce the risk of data loss due to disk failure. The high performance HPE StoreOnce 6500 extends this reliability with autonomic restart and no single point of failure in your backup process by offering redundancy at every level.

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 and Storage Administrators live in fear of corrupted backups only discovered when they need to restore their data. StoreOnce appliances have been designed with the necessary technology which delivers this essential high degree of data protection. Hewlett Packard Enterprise has unique intellectual property which protects data throughout its lifecycle when stored on the HPE StoreOnce appliance. HPE StoreOnce Integrity Plus is a market leader in data integrity. HPE StoreOnce technology has 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.

Common Features and Benefits

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. Customers get the simplicity and performance of snapshot-based protection to generate application-consistent recovery points as well as the reliability and efficiency of deduplicated backups for guaranteed recovery.

HPE StoreOnce VSA Backup

HPE StoreOnce VSA Backup

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 for the StoreOnce VSA and the purpose built appliances.

Overview product specifications

	VSA 4 TB	VSA 10 TB	VSA 50 TB
Usable configurable capacity	4TB	10TB	50 TB
Catalyst write performance (max)	1 TB/hour	2 TB/hour	6 TB/hour
NAS, VT write performance (max)	400 GB/hour	800 GB/hour	2.4 TB/hour
Replication fan-in/fan-out (appliance)	8/2	8/2	8/2
Backup targets (recommended max)	4	6	8
Concurrent data streams (max)	16	24	32
Backup targets supported	Catalyst, VTL, NFS, CIFS over Ethernet		
Hypervisor support	VMware ESXi, Microsoft Hyper-V - for details see **http://www.hp.com/go/BURAcompatibility**		
license-to-use **term**	3 or 5 years		
Technical support	Business hours phone technical support included for license-to-use term		
Care Packs	Available to upgrade included technical support		

Freeware: A 1 TB 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 Care Packs 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.hp.com/go/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, 5 TB or 10 TB virtual disks up to the licensed capacity. Attempts to add virtual disk of other sizes will fail. 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:

HPE StoreOnce VSA Backup

Configured capacity	1 TB to 4 TB	5 TB to 10 TB	10 TB to 50 TB
Memory (min)	1 6GB	24 GB	32 GB
Processor (min @ 2.2GHz)	2 vCPU	4 vCPU	12 vCPU
IOPs (typical)	450	900	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.hp.com/go/support**

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.
- 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

Description	**3 year** license-to-use	**5 year** license-to-use
StoreOnce VSA 4 TB	D4T77AAE, D4T77A	D4U49AAE, D4U49A
StoreOnce VSA 10 TB	TC458AAE, TC458A	D4U62AAE, D4U62A
StoreOnce VSA 4 TB to 10 TB Capacity Upgrade	D4U56AAE, D4U56A	D4U58AAE, D4U58A
StoreOnce VSA 50 TB	D4U47AAE, D4U47A	D4U48AAE, D4U48A

HPE StoreOnce VSA Backup

StoreOnce VSA 10 TB to 50 TB Capacity Upgrade	D4U57AAE, D4U57A	D4U59AAE, D4U59A

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.
- If a license-to-use (LTU) reaches the end of its term all backup targets become read-only. Once a valid license key is added full functionality is returned.
- 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 an additional Security Pack license.
- A capacity upgrade license can be added only if there is a valid license installed on the StoreOnce VSA.
  - For example, a 4TB to 10TB capacity upgrade license can be applied only if a 4TB base license is installed on the StoreOnce VSA.
  - For example, a 10TB to 50TB capacity upgrade license can be applied only if a 10TB base license is installed on the StoreOnce VSA.
- There is no license to upgrade directly from 4TB to 50TB. This is accomplished by upgrading first to 10TB, then to 50TB.
- Once the capacity upgrade license is added, the licensed term of the StoreOnce VSA will be 3 or 5 years, depending on license purchased, regardless of the remaining term of the previous smaller capacity license.
- For more information on adding capacity expansion licenses see the StoreOnce VSA Deployment and Configuration Guide
- The StoreOnce VSA licenses can be used for an initial 3 or 5 year license-to-use term. The same licenses can be used to extend a license-to-use term.
- A license to extend a current license-to-use term can only be activated, less than 180 days from the end of the current license term.
  NOTE: A check for the time left on the current license is made at activation time, not at purchase time. 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 license-to-use period 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.
- For more information on extending the license-to-use term see the StoreOnce VSA Deployment and Configuration Guide
- The license-to-use term starts from the day the license is redeemed from the Hewlett Packard Enterprise licensing portal.

HPE StoreOnce VSA Backup

HPE StoreOnce Systems

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, allowing a full 25.6 TB* of backup to be completed in just 4 hours.

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 4900 and StoreOnce 6500 Backup systems, plus 9x5 phone support for the duration of the warranty.

Purchasing information:

Also refer to **Software Options**

HPE StoreOnce Systems

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: • Important Card • Start Here Poster • Ethernet cable(Cat 5e) 3m (x2) • Power cable (IEC 320 C13 Connector for Rack PDU)

HPE StoreOnce Systems

HPE StoreOnce 3520 System

HPE StoreOnce 3520 is designed for small to midsized data centers and as a replication target device for up to remote and branch offices. The StoreOnce 3520 delivers a scalable 2U solution from 7.5 to 15.5 TB of usable*** capacity (12-24 TB RAW) using an upgrade license. Meet backup windows with speeds of up to 12.7 TB/hour***** using HPE StoreOnce Catalyst for protection of up to 50.8 TB* of data in a 4-hour window.

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 assures that your HPE Systems work with leading servers, operating systems, and backup applications, including those not manufactured by HP.

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.

HPE StoreOnce Systems

- 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 4900 and StoreOnce 6500 Backup systems, plus 9x5 phone support for the duration of the warranty.

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 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 Systems

HPE StoreOnce 3540 Systems

HPE StoreOnce 3540 is designed for small to midsized data centers and as a replication target device for up to 24 remote and branch offices. The StoreOnce 3540 delivers a scalable 2U solution from 16 to 31.5 TB of usable*** capacity (24 to 48 TB RAW) using a simple and cost effective capacity upgrade. Meet backup windows with speeds of up to 12.7 TB/hour* using HPE StoreOnce Catalyst for protection of up to 50.8 TB* of data in a 4-hour window.

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 2 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 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**

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 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

HPE StoreOnce Systems

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 4900 and StoreOnce 6500 Backup systems, plus 9x5 phone support for the duration of the warranty.

Purchasing information:

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 Systems

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 larger data centers or regional offices. It also provides a replication target device for up to 50 remote or branch offices. StoreOnce 5100 delivers a scalable 2U to 12U solution from 36 TB to 216 TB of usable*** capacity (48 TB to 288 TB RAW)and 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	32

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 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 assures that your HPE Systems work with leading servers, operating systems, and backup applications, including those not manufactured by HP.

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. 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.

HPE StoreOnce Systems

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 4900 and StoreOnce 6500 Backup systems, plus 9x5 phone support for the duration of the warranty.

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 discs, 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

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 4900 Backup

HPE StoreOnce 4900 delivers cost-effective, scalable disk-based backup with deduplication for longer term on-site data retention and off-site disaster recovery for large data centers or regional offices. It also provides a replication target device for up to 50 remote or branch offices. The StoreOnce 4900 delivers a scalable 7U to 12U solution from 36 TB to 432 TB of usable*** capacity (60 to 560 TB RAW) and speeds of up to 22 TB/hour***** with HPE StoreOnce Catalyst for protection of 88 TBs* of data in a 4-hour window.

Overview Product Specifications

	StoreOnce 4900
Form Factor	7 to 12U Scalable Rack (plus 1U support shelf- not shown)
Total capacity (raw)	Up 560 TB
Total capacity (usable*)**	Up to 432 TB
Write performance (max)	8.5 TB/hour
Catalyst performance (max)	22 TB/hour
Max fan-in/backup targets	50

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 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 drawers for up to 280 TB RAW (216 TB usable***).

If more storage is needed, simply purchase an additional expansion kit containing 60 TB RAW (36 TB usable***) capacity and again add up to 5 additional 44 TB (36 TB usable***) capacity upgrade kits to complete the second set of drawers for a total capacity of up to 560 TB RAW (432 TB usable***). Note that fully expanded the HPE StoreOnce 4900 includes 4 drawers of disk (2 drawers in

HPE StoreOnce 4900 Backup

each unit). A fully configured HPE StoreOnce 4900 is 12U (or 36 TB per U in terms of density).

Compatibility:

Hewlett Packard Enterprise extensive compatibility testing program assures that your HPE Backup 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**

Configuration notes:

- The StoreOnce 4900 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 4900 Backup systems can be connected to the servers they protect via a 10 GB Ethernet or 8Gb Fibre Channel.
- 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 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.

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 4500, StoreOnce 4700, StoreOnce 4900 and StoreOnce 6500 Backup systems, plus 9x5 phone support for the duration of the warranty.

Purchasing information:

Product name	Part-number	Description	Includes
HP StoreOnce 4900 Backup	BB903A	HP StoreOnce 4900 Backup with 60 TB of RAW disk storage	- HP 4900 Backup (15 x 4 TB disks) - Ethernet cable(Cat 5e) 3m (x2) 2 x Power cords (with IEC 320 C13 plug for Rack PDU) - Installation poster - HPE StoreOnce Backup CD (contains installation wizard, device drivers, and documentation, all localized in multiple languages)
HP StoreOnce 4900 60TB Drawer/Capacity Upgrade Kit	BB904A	HP 4900 Backup additional drawers and capacity upgrade kit, D6000 base enclosure including additional 60 TB of RAW disk storage	1 storage enclosure with 15 x 4 TB discs, redundant power supplied and fan modules. - Rack-mounting hardware kit 0.5m mini-SAS cable + 2m mini-SAS cable

HPE StoreOnce 4900 Backup

			• Two AC power cords and two PDU interconnect cords • Entitlement certificate
HP StoreOnce 4900 44TB Capacity Upgrade Kit	BB908A	HP 4900 Backup 44 TB Capacity Upgrade Kit	• 11 x 4 TB disks and 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

HPE StoreOnce 6500 Backup

HPE StoreOnce 6500 Backup

Shown with initial 120 TB 6500 Backup system with 88 TB Capacity Upgrade Kit in a 42U rack

HPE StoreOnce 6500 takes HPE StoreOnce to the enterprise, providing disk based backup with deduplication for cost effective, longer term on site data retention and off site disaster recovery. The highest performance HPE StoreOnce Backup system, these highly scale-out solutions offer from 72 TB to 1728 TB of usable*** capacity (120 to 2240 TB RAW) and industry-leading aggregate speeds of up to 139 TB/hr***** with StoreOnce Catalyst to match enterprise performance requirements and meet ever shrinking backup windows.

Overview Product Specifications

	StoreOnce 6500
Form Factor	Provided in a 42U rack
Total capacity (raw)	Up to 2240 TB
Total capacity (usable*)**	Up to 1728 TB
Write performance (max)	63.2 TB/hour
Catalyst performance (max)	139 TB/hour
Max fan-in/backup targets	384

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

NOTE: ***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 6500 is designed with no single point of hardware failure. The hardware of the HPE StoreOnce 6500's couplet is resilient to any one component failing. This means the following high availability features:

- Autonomic Restart and node failover
- RAID storage, with RAID6 as the minimum redundancy level (so each RAID set can survive a double disk failure)
- 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.
- Dual storage controllers (RAID and JBOD), with cache mirroring between the RAID controllers (so that if a controller fails

HPE StoreOnce 6500 Backup

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 6500:
- Start out with the HPE StoreOnce 6500 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 6500 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 Backup 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 6500 120TB system and again scale up by adding capacity upgrade kits. This gives you a maximum configuration of two fully configured HPE StoreOnce 6500 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 6500 120TB Backup for extra Racks (contains additional base couplet, switch, cables and pulls in another 42U rack), and populate as before.

Upgrading an existing HPE StoreOnce B6200:
Customers who have already invested in the HPE StoreOnce B6200 are still able to expand their storage to its full capacity of 768 TB RAW (512 TB usable***) by purchasing additional capacity upgrade kits or utilizing mixed couplet support to scale up.
- To scale out in terms of capacity, simply add up to 3 capacity upgrade kits to each couplet for a maximum of 192 TB RAW capacity (128 TB usable***) per couplet. A fully configured couplet with 3 capacity upgrade kits, can be managed as a single file system of up to 192 TB RAW capacity (128 TB usable***), however to optimize performance within a couplet, capacity usage should be balanced across both nodes within a couplet.

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

Expanding an existing StoreOnce B6200 by adding StoreOnce 6500 couplet(s) via mixed couplet support:
- Facilitates expanding an existing 1 to 3 couplet B6200 configuration
- Existing B6200 does not have to be fully populated with capacity upgrades
- Existing configuration can be expanded to currently supported maximum of 4 couplets
- Existing B6200 system needs to be on 3.11.3 firmware as a minimum
- Use the table below to determine what components are necessary to complete the expansion (note that the 6500 couplets can be expanded beyond their initial capacity as usual by ordering the 6500 capacity upgrade kit – BB899A 88

HPE StoreOnce 6500 Backup

TB Capacity Upgrade Kit).

Existing Configuration		Upgrade	SKUs Required				
B6200 Couplet(s)	6500 Couplet(s)	Adding 6500 couplet(s)	BB897A For existing racks	BB897A#0D1 For existing racks, factory integrated	BB900A For extra racks	BB902A Mixed couplet interlink cable kit	BB912A Mixed couplet SFP kit
1	0	1	1	0	0	0	1
1	0	2	1	0	1	1	0
1	0	3	1	1	1	1	0
2	0	1	0	0	1	1	0
2	0	2	0	1	1	1	0
3	0	1	1	0	0	0	1
1	1	1	0	0	1	1	0
1	1	2	0	1	1	1	0
1	2	1	1	0	0	0	0
2	1	1	1	0	0	0	0

See **purchasing information** and **configuration notes** for more detail.

Compatibility:

Hewlett Packard Enterprise's extensive compatibility testing program assures that your HPE Backup 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 4500, StoreOnce 4700, StoreOnce 4900 and StoreOnce 6500 Backup systems, plus 9x5 phone support for the duration of the warranty.

Purchasing information:

Product name	Part-number	Description	Includes
HP StoreOnce 6500 120 TB for Initial Rack	BB896A	HP StoreOnce 6500 Backup with 120 TB of RAW disk storage	• HPE 6500 Processing Nodes (2) • HPE 6500 Switch kit • HPE 6500 Storage Drawers (2)(each with 15* 4 TB HDDs) • 4 x 0.5m Mini SAS cables • 16 x 2m SAS-HD to Mini SAS cables • 16 x Power cords (with IEC 320 C13 plug for Rack PDU) • Provided in a 42U rack
HP StoreOnce 6500 88 TB Capacity Upgrade Kit	BB899A	HP StoreOnce 6500 88 TB upgrade kit, offering additional 88 TB of RAW disk storage	• 22 * 4 TB HDDs • HPE 6500 88TB Capacity Upgrade License Entitlement Certificate
HP StoreOnce 6500 120 TB for Existing Rack	BB897A	HP StoreOnce 6500 Backup with 120 TB of RAW disk storage	• HPE 6500 Processing Nodes (2) • HPE 6500 Storage Drawers (2)(each

HPE StoreOnce 6500 Backup

(**NOTE:** for use in existing StoreOnce B6200/6500 systems only)			with 15* 4 TB HDDs) • 4 x 0.5m Mini SAS cables • 12 x Power cords (with IEC 320 C13 plug for Rack PDU)
HP StoreOnce 6500 120 TB for Second Rack	BB900A	HP StoreOnce 6500 Backup with 120 TB of RAW disk storage	• HPE 6500 Processing Nodes (2) • HPE 6500 Switch kit • HPE 6500 Storage Drawers (2)(each with 15* 4 TB HDDs) • 4 x 0.5m Mini SAS cables • 16 x 2m SAS-HD to Mini SAS cables • 16 x Power cords (with IEC 320 C13 plug for Rack PDU) • Provided in a 42U rack
HP StoreOnce B6200 to 6500 Interlink Kit	BB902A	Cables required to implement mixed couplet support between currently installed B6200 and 6500	• 8 x 15m optical cables • 4 x 10GbE SFP+ transceivers
HP StoreOnce 6500 Mixed Couplet SFP Kit	BB912A	SFPs required to connect an HP StoreOnce 6500 Couplet (BB897A) into an existing HPE StoreOnce B6200 installation to create a Mixed Couplet.	• 4 x 10GbE SFP+ transceivers • 8 x 2m SAS HD to Mini SAS cables

Also refer to **Software Options**

HPE StoreOnce 6500 Detailed Performance Specifications

StoreOnce 6500 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
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 6500 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 6500 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

HPE StoreOnce 6500 Backup

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 6500 Performance*(maximum aggregated data transfer rate using VTL)				
	1 couplet	2 couplet	3 couplet	4 couplet
Write Performance	15.8 TB/hr	31.6 TB/hr	47.4 TB/hr	63.2 TB/hr
Read Performance	18.8 TB/hr	37.6 TB/hr	56.4 TB/hr	75.2 TB/hr
StoreOnce 6500 with StoreOnce Catalyst Performance*(maximum aggregated data transfer rate using Catalyst)				
	1 couplet	2 couplet	3 couplet	4 couplet
Write Performance	34.8 TB/hr	69.6 TB/hr	104.4 TB/hr	139.2 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 6500:
- The HPE Storage Sizer tool must be used to correctly size a deduplication and replication enabled system
- 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 6500:
- The StoreOnce 6500 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 6500, 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 6500 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 6500 which require mandatory factory express integration of the 6500 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 BB896A or BB900A SKU's are ordered.
  - When wishing to expand an existing system, the customers 2nd or 4th 6500 couplet (BB897A) is not factory integrated and can be ordered without the #OD1 option, as the 1st and 3rd 6500 couplets are already housed in the 42U racks and have been factory integrated with switch kits
- It is NOT possible to order BB897A or BB900A without first ordering BB896A. It is NOT possible to order BB896A without the factory integrated rack (BW904A)
- Option #OD1 must be added to products listed for essential factory integration, i.e. BB896A HPE StoreOnce 6500 120TB for Initial Rack and\or BB900A HPE StoreOnce 6500 120TB for Extra Racks

Factory Integrated Cluster:

	Couplet 1	Couplet 2	Couplet 3	Couplet 4

HPE StoreOnce 6500 Backup

	HP StoreOnce 6500 120TB for Initial Rack BB896A		HP StoreOnce 6500 120TB for Extra Racks BB900A	
Rack	Automatically added to Config when BB896A ordered	If required, order BB897A HP StoreOnce 6500 120TB for Existing Rack	Automatically added to Config when BB900A ordered	If required, order BB897A HP StoreOnce 6500 120TB for Existing Rack
Add capacity	BB899A	BB899A	BB899A	BB899A
Add capacity	BB899A	BB899A	BB899A	BB899A
Add capacity	BB899A	BB899A	BB899A	BB899A
Add capacity	BB899A	BB899A	BB899A	BB899A
Add capacity	BB899A	BB899A	BB899A	BB899A
HP 6000 StoreOnce Replication License	Qty 1 - EJ026A\AAE	Qty 1 - EJ026A\AAE	Qty 1 - EJ026A\AAE	Qty 1 - EJ026A\AAE
HP 6000 StoreOnce Encryption License	Qty 1 - BB894A\AAE	Qty 1 - BB894A\AAE	Qty 1 - BB894A\AAE	Qty 1 - BB894A\AAE
HP 6000 StoreOnce Catalyst License	Qty 1 - BB895A\AAE	Qty 1 - BB895A\AAE	Qty 1 - BB895A\AAE	Qty 1 - BB895A\AAE

Factory Integrated Cluster - Additional Form Factors

	Couplet 1	**Couplet 2**	**Couplet 3**	**Couplet 4**
	HP StoreOnce 6500 120TB for Initial Rack BB896A		HP StoreOnce 6500 120TB for Extra Racks BB900A	
Couplet	18U	16U	18U	16U
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 brings to fruition the HPE StoreOnce 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:

- Federated Catalyst is a new feature for the StoreOnce multi-node products.
- StoreOnce Federated Catalyst allows Catalyst stores to span nodes simplifying backup management and optimizing available storage in large environments yet continues to provide high resiliency and optimize performance
- 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 you don't have to invest in additional infrastructure
- 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 Backup 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 139 TB/hour* aggregate throughput.

*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.

Ordering Information

HPE StoreOnce Catalyst is available by electronic license for customers of any of the latest HPE StoreOnce Backup systems with a wide range of backup applications via.
http://www.webware.hp.com

Model / license for	StoreOnce License/E-LTU	Part number
HP StoreOnce 6500 and B6200	E-LTU	BB895AAE
	LTU	BB895A
HP StoreOnce 4900	E-LTU	BB906AAE
	LTU	BB906A
HP StoreOnce 4500/ HPE StoreOnce 5100	E-LTU	BB888AAE
	LTU	BB888A
HPE StoreOnce 2000/3000	E-LTU	BB887AAE
	LTU	BB887A

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

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

Software and Software Options

will be required for each target appliance.
- Every StoreOnce Backup system (and 6500 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.hp.com/go/buracompatibility**
  - **BridgeHead Software (for supported versions see**
  - **http://www.hp.com/go/buracompatibility**
  - Symantec NetBackup (via an HPE OST plug-in) available from **http://www.hp.com/go/StoreOnce/VERITAS**
  - Symantec Backup Exec (via an HPE OST plug-in available from
  - **http://www.hp.com/go/StoreOnce/VERITAS**
  - Oracle RMAN (via an HPE plug-in) available from
  - **http://www.hp.com/go/StoreOnce/OracleRMAN**
  - Microsoft SQL Server (via HPE plug-in) available from **http://www.hpe.com/go/StoreOnce/SQLServer**
  - **http://www.hp.com/go/StoreOnce/SQLServer**
  - SAP HANA (via HPE plug-in) available from **http://www.hpe.com/go/StoreOnce/SAPHANA**
  - SAP on Oracle (via HPE plug-in) available from **http://www.hpe.com/storage/storeonce-SAPOracle**
  -

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 StoreOnceSystems, replication is licensed by VTL/NAS target, this means that with one replication license:

Model / license for	Max number of targets supported	Replication License/E-LTU	Part number
HP StoreOnce 6500 and B6200	384	E-LTU	EJ026AAE
		LTU	EJ0206A
HP StoreOnce 4900	50	E-LTU	BB905AAE
		LTU	BB905A
HP StoreOnce 4500/ HPE StoreOnce 5100	24	E-LTU	BB885AAE
		LTU	BB885A
HPE StoreOnce 2000/3000	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

Software and Software Options

required for appliances which only act as replication sources)
- 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 6500 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 StoreOnce appliances through a single interface with 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 and 5100 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**

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.hp.com/go/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.hp.com/hpsc/doc/public/display?docId=c04608993**

Software and Software Options

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.
  NOTE: Centralized Encryption Key Management is currently only supported on 3100, 3520, 3540 and 5100 products.
- Local Key Management is included with 1 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
- 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 6000 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
HP StoreOnce 6500 and B6200	E-LTU	BB894AAE
	LTU	BB894A
HP StoreOnce 4900	E-LTU	BB907AAE
	LTU	BB907A
HP StoreOnce 4500/ HPE StoreOnce 5100	E-LTU	BB892AAE
	LTU	BB892A
HPE StoreOnce 2000/3000 series	E-LTU	BB891AAE
	LTU	BB891A

Cabling and other options

HPE 10GbE Connectivity	**The following cables are recommended for HPE 10GbE connectivity.**	
	NOTE: Optical 10GbE SFPs are included in 4900 and 6500 but should be purchased separately for the B6200 or previous version of StoreOnce products.	
10GbE Fibre Optic Modules	HP BladeSystem c-Class 10Gb SFP+ SR Transceiver	455883-B21
	NOTE: Fibre transceivers and cables must be purchased separately for B6200 fibre-optic environments - 4 transceivers are required for each couplet.	
HPE ProCurve 10GbE Connectivity	The following cables are recommended for 10GbE connectivity with HPE ProCurve network switches.	
Direct Attach Copper Cables	HP X242 10G SFP+ to SFP+ 1m Direct Attach Copper Cable	J9281B
	HP X242 10G SFP+ to SFP+ 3m Direct Attach Copper Cable	J9283B
	HP X242 10G SFP+ to SFP+ 7m Direct Attach Copper Cable	J9285B
	HP X244 10G XFP to SFP+ 1m Direct Attach Copper Cable	J9300A
	HP 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**	
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 1m Cable	QK732A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 2m Cable	QK733A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 5m Cable	QK734A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 15m Cable	QK735A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 30m Cable	QK736A
	HP Premier Flex LC/LC Multi-mode OM4 2 fiber 50m Cable	QK737A
	OM3 FC cables	
	HP LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A
	HP LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
	HP LC to LC Multi-mode OM3 2-Fiber 2.0m 1-Pack Fiber Optic Cable	AJ835A
	HP LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
	HP LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
	HP LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
	HP 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**	
	HP LC to LC Multi-mode OM3 2-Fiber 0.5m 1-Pack Fiber Optic Cable	AJ833A

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	HP LC to LC Multi-mode OM3 2-Fiber 1.0m 1-Pack Fiber Optic Cable	AJ834A
	HP LC to LC Multi-mode OM3 2-Fiber 5.0m 1-Pack Fiber Optic Cable	AJ836A
	HP LC to LC Multi-mode OM3 2-Fiber 15.0m 1-Pack Fiber Optic Cable	AJ837A
	HP LC to LC Multi-mode OM3 2-Fiber 30.0m 1-Pack Fiber Optic Cable	AJ838A
	HP 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

	HP 500W Flex Slot Platinum Hot Plug Power Supply Kit	720478-B21

Network/Channel Cards

The following cards are available for StoreOnce 3520, 3540 and 5100 only

	HPE StoreOnce 10 GbE Network Card	BB926A
	HPE StoreOnce 10 GbE-T Network Card	BB927A
	HPE StoreOnce 8 GB Fibre Channel Card	BB928A

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.

Technical Specifications

	StoreOnce VSA 4 TB	StoreOnce VSA 10 TB	StoreOnce VSA 50 TB	StoreOnce 3100	StoreOnce 3520	StoreOnce 3540	StoreOnce 5100	StoreOnce 4900	StoreOnce 6500
Form Factor	Virtual appliance	Virtual appliance	Virtual appliance	1U rack	2U rack	2U rack	2 to 12U scalable rack	7 to 12U scalable rack	Provided in 42U 1075mm rack
Total Capacity (RAW)				8 TB	24 TB	48 TB	288 TB	Up to 560 TB	Up to 2240 TB
Total Capacity (Usable***)	up to 4 TB	up to 10 TB	1 to 50 TB	5.5 TB	15.5 TB	31.5 TB	216 TB	Up to 432 TB	Up to 1728 TB
Data retention with deduplication	80 TB	200 TB	1000 TB	110 TB	282 TB	573 TB	3360 TB	8.6 PB	34 PB
Fan-in Max	8	8	8	24	96	96	96	50	384
Write Performance (max aggregated data transfer rate using VTL)	400 GB/hr	800 GB/hr	2.4 TB/hr	1.6 TB/hr	4.6 TB/hr	4.6 TB/hr	13.8 TB/hr	8.5 TB/hr	63.2 TB/hr
Read Performance (max aggregated data transfer rate using VTL)	225 GB/hr	600 GB/hr	1.8 TB/hr	1.4 TB/hr	4.1 TB/hr	4.1 TB/hr	14.2 TB/hr	10.1 TB/hr	75.2 TB/hr
StoreOnce Catalyst Performance (max aggregated data transfer rate)	1 TB/hr	2 TB/hr	6 TB/hr	6.4 TB/hr	12.7 TB/hr	12.7 TB/hr	26.7 TB/hr	22 TB/hr	139 TB/hr
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)	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	4x 8Gb Fibre Channel, 4x 1Gb Ethernet, 4x10Gb Ethernet	8x 8Gb Fibre Channel, 8 x 1Gb Ethernet, 4 x10Gb Ethernet Per Couplet
Disk drives	n/a	n/a	n/a	2 TB, SAS 7200rpm,	2 TB, SAS 7200rpm,	4 TB, SAS 7200rpm,	4 TB, SAS 7200rpm,	4 TB, SAS 7200rpm,	4 TB, SAS 7200rpm,

Technical Specifications

				3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch	3.5-inch
Number of Disk Drives	n/a	n/a	n/a	4	12	12	12 to 72 (max)	15 (min), 140 (max)	30 (min), 560 (max)

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

RAID Support	n/a	n/a	n/a	Hardware RAID 5	Hardware RAID 6	Hardware RAID 6	Hardware RAID 6	Hardware RAID 6	Hardware RAID 6
Total number of backup targets	4	12	16	8	24	24	32	50	384

StoreOnce Catalyst, Virtual Tape Libraries and NAS backup targets combined

Max Number of Cartridges Emulated	2048	6144	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	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	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	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	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	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	LWAd 5.5A LpAm 37dBA	LWAd 5.7A LpAm 39dBA	LWAd 5.7A LpAm 39dBA	LWAd 5.7A LpAm 39dBA		
Operating	n/a	n/a	n/a	LWAd 3.2C	LWAd 5.9C	LWAd 5.9C	LWAd		

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(random seeks to disks)					LpAm 46dBA	LpAm 31dBA	LpAm 31dBA	5.9C LpAm 31dBA

Power requirements for StoreOnce 4900

Input Voltage	208V				220V				240V			
	A	W	VA	BTU/hr	A	W	VA	BTU/hr	A	W	VA	BTU/hr
Base configuration (1 drive enclosure) (total 15 drives)	6.7	1374	1384	4989	6.3	1373	1385	4987	5.8	1373	1387	4987
Expansion 1 (total 26 drives)	7.2	1490	1504	5427	6.8	1490	1503	5425	6.3	1490	1505	5425
Expansion 2 (total 37 drives)	7.8	1607	1619	5866	7.4	1606	1621	5863	6.8	1606	1623	5863
Expansion 3 (total 48 drives)	8.3	1724	1737	6304	7.9	1723	1739	6302	7.3	1723	1741	6302
Expansion 4 (total 59 drives)	8.9	1841	1854	6743	8.4	1840	1857	6740	7.7	1840	1859	6740
Expansion 5 (total 70 drives) (Max)	9.5	1957	1972	6683	9	1957	1975	6680	8.2	1957	1977	6680
Expansion 6 (additional drive enclosure) (total 85 drives)	13.8	2844	2866	10010	13	2843	2869	10008	12	2843	2872	10008
Expansion 7 (total 96 drives)	14.3	2960	2983	10448	13.6	2956	2987	10446	12.5	2956	2990	10446
Expansion 8 (total 107 drives)	14.9	3077	3100	10887	14.1	3076	3105	10884	13	3076	3108	10884
Expansion 9 (total 118 drives)	15.5	3194	3218	11325	14.6	3193	3222	11323	13.4	3193	3226	11323
Expansion 10 (total 129 drives)	16	331	3336	11764	15.2	3310	3340	11761	13.9	3310	3344	11761
Expansion 11 - Maximum Capacity (total 140 drives)	16.6	3427	3453	11704	15.7	3427	3458	11701	14.4	3427	3462	11701

Power requirements for StoreOnce 6500

Input Voltage	208V				220V				240V			
	A	W	VA	BTU/hr	A	W	VA	BTU/hr	A	W	VA	BTU/hr
1st-couplet base configuration (total 30 drives)	16.9	3479	3505	1247	15.9	3478	3510	12471	14.6	3478	3513	12471
Expansion 1 (total 52 drives)	18.0	3713	3741	13353	17.0	3711	3745	13348	15.6	3711	3750	13348

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Expansion 2 (total 74 drives)	19.1	3946	3976	14230	18.1	3945	3981	14225	16.6	3945	3985	14225
Expansion 3 (total 96 drives)	20.2	4180	4211	15106	19.2	4178	4217	15101	17.6	4178	4221	15102
Expansion 4 (total 118 drives)	21.4	4413	4446	15983	20.2	4412	4452	15978	18.6	4412	4457	15978
Expansion 5 (total 140 drives) (Max)	22.5	4647	4682	16860	21.3	4645	4688	16855	19.6	4645	4693	16855
2nd-couplet base configuration (assuming 1st couplet at full capacity) (total 30 drives)	35.8	7394	7449	25841	33.9	7391	7459	25831	31.1	7391	7467	25832
Expansion 1 (total 52 drives)	36.9	7627	7685	26718	35.0	7624	7694	26708	32.1	7624	7703	26708
Expansion 2 (total 74 drives)	38.1	7861	7920	27595	36.0	7858	7930	27585	33.1	7858	7939	27585
Expansion 3 (total 96 drives)	39.2	8094	8155	28472	37.1	8091	8166	28462	34.1	8091	8175	28462
Expansion 4 (total 118 drives)	40.3	8328	8390	29349	38.2	8325	8401	29338	35.1	8325	8411	29339
Expansion 5 (total 140 drives) (Max)	41.5	8561	8626	30225	39.3	8558	8637	30215	36.0	8558	8647	30216

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	4900	6500 120 TB for Initial Rack
	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					

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		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).
	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 4900 44 TB Drawer/Cap Upgrade Kit	StoreOnce 4900 60 TB Drawer/Cap Upgrade Kit	6500 120 TB for Existing Rack	6500 120 TB for Extra Racks	6500 88 TB Capacity Upgrade Kit
	Form factor	2U		5U	14U	42U	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)	17.6 x 35.1 x 24.3 in (44.7 x 89.12 x 61.66 cm)	23.54 x 44.30 x 79.00 in (59.78 x 112.52 x 200.66 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)	24.1 x 43 x 63.8 in (61 x 109 x 162 cm)	35.43 x 50.87 x 85.35 in (90 x 129.20 x 216.80 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)	556.87 lb (253.12 kg)	953 lb (433 kg)	43.56 lb (19.8 kg)
	Shipping	78lbs (35.38kg)		238.78 lb (108.31 kg)	615.35 lb (279.12 kg)	1162 lb (528 kg)	50.16 lb (22.8 kg)

HPE Support Services and Warranty Information

HPE Support Services and Warranty Information Services to accelerate time to results

HPE Support Services bring you a rich portfolio of consulting and support services designed to add value to our core storage products and solutions. We have the know-how and experience to put storage technology to work for you. We work closely with you as your strategic partner, leveraging our full services portfolio to make sure that everything works to optimize your enterprise. Choose from services aligned to our storage product offerings and lifecycle. From mission-critical onsite services to innovative web-based remote support, you choose the precise level of attention and support your business demands.

Technical Specifications

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 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.

Technical Specifications

http://h20195.www2.hpe.com/V2/GetPDF.aspx/4AA3-0774ENW.pdf

HPE Proactive Select - A flexible way to purchase services to fit your environment with an extensive menu of HPE Proactive Select event and technical services, such as onsite firmware upgrades, health checks, assessments, and education.
http://h20195.www2.hpe.com/V2/GetPDF.aspx/4AA2-3842ENW.pdf

Operate and support

Choose the right support to maximize uptime, free up your resources, and achieve improved value-as you get the most out of the existing IT assets while accelerating time-to-revenue. HPE Support Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners.
Services for customers purchasing from Hewlett Packard Enterprise or an enterprise reseller are quoted using Hewlett Packard Enterprise order configuration tools. Customers purchasing from a commercial reseller can find HPE Support Services at
http://www.hp.com/go/lookuptool

HPE Proactive Care 24x7 - Hardware and software support services designed specifically for your technology with rapid access to Advanced Solution Center Specialists plus firmware and software management and best practice advice
http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf

HPE Proactive Care Advanced builds and incorporates on Proactive Care and also gives customers personalized technical and operational advice from an assigned, local Account Support Manager for personalized technical collaboration, flexible access to specialist skills to help optimize business critical IT, and enhanced Critical Incident Management to help so the business is not affected if there is a system or device outage.
http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA5-3259ENW.pdf

HPE Datacenter Care
Get the support you need to deploy, operate, and evolve your data center environment to be hybrid-cloud ready with single-point-of-accountability for Hewlett Packard Enterprise and others' product.
http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA4-0459ENW.pdf

HPE Foundation Care - HPE Foundation Care connects you to HPE 24 hours a day, seven days a week for assistance on resolving issues - hardware onsite response within four hours and software call back within two hours after opening your case. Three years' coverage recommended with HPE support Service.
http://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA4-8876ENW.pdf

HPE Education Services - Comprehensive training for new, as well as experienced, storage administrators designed to expand your skills and keep you up to speed with the latest storage and virtualization technology from HPE Storage.
http://www.hp.com/learn/storage

Get connected and get back to business – HPE Storage Technology Services provide the path to
get your HPE Storage solutions and your business connected to Hewlett Packard Enterprise. Once connected, our experts
are able to scan your system and run health checks, then use that data to create personalized
reports and recommendations for actions to take to prevent problems and downtime.

Flexible Installation and Startup SKU's and option bands

Technical Specifications

HPE StoreOnce 6500HP StoreOnce 6500 System Installation and Startup service

		Up to 4-Couplets, Initial Installation	Add-On Couplet without #0D1	Add-On 2 or 3 Couplets with Expansion Rack	Capacity Upgrade
		Same Site	Same Site	Same Site	Same Site
		(Quote qty one for each additional site)			
Part	**Description**	**Service SKU**			
BB896A	HP StoreOnce 6500 120 TB Backup Couplet for Initial Rack	HA124A1#5RZ			
BB897A	HP StoreOnce 6500 120 TB Backup Couplet for Existing Racks		HA124A1#5S0	HA124A1#5S1	
BB900A	HP StoreOnce 6500 120 TB Backup Couplet for Additional Racks				
BB899A	HP StoreOnce 6500 88 TB Capacity Upgrade Kit				HA124A1#5S2

HPE StoreOnce 6500 Rack Transition Service

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

HPE StoreOnce 3100, 3520, 3540, 4900 and 5100 System Installation and Startup service

	Service SKU	
Description		**Additional StoreOnce system on same site**
HPE StoreOnce 3100, 3520, 3540, HP StoreOnce 4900 and 5100 System	HA124A1#55Q	HA124A1#55R
HP StoreOnce 4900 system (additional for non #0D1)	HA124A1#5V0	
HP StoreOnce 4900 capacity upgrade (additional for non #0D1)	HA124A1#5V0	
HPE StoreOnce 5100 Capacity upgrade (non #0D1)	HA113A1#5KK	

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

Advanced start-up services

Technical Specifications

HPE StoreOnce Catalyst and Replication Solution Service

HPE StoreOnce Catalyst Solution and Replication Solution Services. These are for the HPE StoreOnce 6500 and 4900 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
HP StoreOnce Catalyst solution service lvl1	HA124A1#58E
HP StoreOnce Catalyst solution service lvl2	HA115A1#58F
HP StoreOnce Catalyst solution service lvl3	HA115A1#58G
HP StoreOnce Replication solution service lvl1	HA124A1#5TY
HP StoreOnce Replication solution service lvl2	HA115A1#5TZ
HP 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, 4900 and 5100

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 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.

	Support	Per Event	Contractual
Description	Service SKU		
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.

Technical Specifications

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

Remote Support Tools	**Service Tools and Technical Support** - HPE Remote Support monitors StoreOnce appliances and allows the appliance to proactively contact Hewlett Packard Enterprise if issues arise on the system. Site-specific data used both proactively and reactively with real-time monitoring and information extraction tools. **NOTE: Requires StoreOnce 3.11.X firmware as a minimum**

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
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 6500 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.

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