Overview

Shape the Future of QuickSpecs – Your Input Matters

HPE StoreOnce Systems

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Does data growth leave you struggling with complex, distributed, and costly data protection? Do you have data that's not being protected because backup windows aren't long enough, or backup jobs are failing? Do you want to use local and cloud-based storage to take advantage of hybrid data protection? Are you concerned about the threat from ransomware? Tackle the cost, risk and complexity of data protection with HPE StoreOnce; disk-based, deduplicating, cloud integrated, backup systems providing automated backup, data recovery and data retention for Hybrid IT. ?

Cut the cost of data protection with a single, unified deduplication architecture offering best in class price-performance across the range. HPE StoreOnce protects small, remote offices to enterprise data centers with highly scalable dedicated appliances and agile virtual appliances and with your choice of backup and recovery software to deliver robust, flexible enterprise-wide data protection. StoreOnce can reduce the amount of backup data you need to store by up to 95%. With our scalable architecture you can pay-as-you-grow to retain over a 100 PB (assuming 20:1 deduplication) of protected data on local and cloud storage, managed through a single console.?

Reduce the risk with industry-leading backup speeds of up to 288 TB/hr* with an HA federated 8 node system using StoreOnce VSA so you can shrink backup windows and meet the most stringent SLAs. When it comes to backup, data recovery and data retention, HPE StoreOnce includes all the features you'd expect from disk backup including data encryption to secure your data at rest, data in flight** and data in the cloud. ?

Simplify and enable your hybrid infrastructure, with HPE's single StoreOnce inline deduplication technology. Managing the movement of backup data has never been easier. The backup-optimized HPE StoreOnce Catalyst interface enables deduplication where you choose; at the data source, on the StoreOnce System and in the cloud. Using Cloud Bank Storage to cloud-enable your current backup and business applications, HPE StoreOnce Systems provide even more flexibility to reduce your cost, risk and complexity. StoreOnce Catalyst prevents exposure of backup copies to ransomware.**?**

Notes:

- *Assumes the use of HPE StoreOnce Catalyst. In all cases, actual performance is dependent upon configuration, data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration. Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.
- ** Data in Flight encryption via IPSec is supported on Low Bandwidth StoreOnce Catalyst Backup, Catalyst Copy and Replication.
- In addition, write performance may be impacted, however performance improvements should be seen after first ingest.

HPE StoreOnce VSA

For information regarding HPE StoreOnce VSA, please refer to the QuickSpecs link below:
https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00067728enw

What's New

- StoreOnce software version 4.3.7 includes all features & enhancements included in software versions 4.1.2, 4.1.3, 4.2.1, 4.2.3, 4.3.0, 4.3.2, 4.3.4, 4.3.5 and 4.3.6. For details about new features & enhancements in 4.3.7 & earlier releases, refer release notes in the HPE Support Center Knowledge

Overview

Base

Notes: TLS 1.0 and 1.1 are disabled in software versions 4.2.3 and greater; only TLS 1.2 is supported?

- StoreOnce 4.3.7 will replace the existing software version 4.3.6 on HPE Support Center. Please upgrade to?? StoreOnce 4.3.7 if you have a system that is running software version 4.3.6

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- StoreOnce software version 4.3.7 supports three new NIC card models:
  - BCM57416 OCP3 will be used for Internal NIC.
  - BCM57416 - Base-T 10G PCIeNIC card will be used on Slots 1,2,4 & 5.
  - BCM57414 - 10/25G SFP28 based PCIeNIC card will be used on Slots 1,2,4 & 5.

- StoreOnce software versions 4.3.7 and above supports Dual Authorization for VTL operations. The important operations need the StoreOnce security officer's approval
- The Cloud Bank read/write connection time is reduced from 24 hours to 15 minutes in StoreOnce software version 4.3.7
- In StoreOnce software version 4.3.7, the minimum and maximum Cloud Store Versions have now been exposed on the GUI during Cloud Bank reconnect to allow the customer to check compatibility when reconnecting a Cloud Bank store
- Please note HPE StoreOnce 4.3.6 will replace the existing software version 4.3.5 on the HPE Support Center. Please upgrade to StoreOnce 4.3.6 if you have a system that is running software version 4.3.5.

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Models

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Appliance Generation	Designed for protection of	Product options	Max usable capacity* (before dedupe) Max performance* with StoreOnce Catalyst
HPE StoreOnce Gen4 Appliances	Enterprise data centers	HPE StoreOnce 5650 Systems	Scale from 36 TB to 1.7 PB usable local capacity* and up to 5.2 PB including Cloud Bank Storage. Backup speeds up to 47 TB/hr*
	Mid-range to enterprise data centers	HPE StoreOnce 5250 Systems	Scale from 36 to 864 TB usable local capacity* and up to 2.56 PB? including Cloud Bank Storage. Backup speeds up to? 41 TB/hr*
		HPE StoreOnce 5200 Systems	Scale from 36 to 216 TB usable local capacity* and up to 648 TB? including Cloud Bank Storage. Backup speeds up to 33 TB/hr*
		HPE StoreOnce 3640 System	Scale from 36 to 108 TB usable local capacity* and up to 324 TB? including Cloud Bank Storage. Backup speeds up to 18 TB/hr*
	Small to mid-range data centers and remote offices	HPE StoreOnce 3620 System	Scale from 16 to 31.5 TB usable local capacity* and up to 94.5 TB? including Cloud Bank Storage. Backup speeds up to 14 TB/hr*
HPE StoreOnce Gen4+ Appliances	Enterprise data centers	HPE StoreOnce 5660 Systems	Scale from 144 to 1.1 PB usable local capacity* and up to 3.4 PB? including Cloud Bank Storage. Backup speeds up to 105 TB/hr*
	Mid-range to enterprise data centers	HPE StoreOnce 5260 Systems	Scale from 144 to 576 TB usable local capacity* and up to 1.7 PB? including Cloud Bank Storage. Backup speeds up to 60TB/hr*

Overview

	Small to mid-range data centers and remote offices	HPE StoreOnce 3660 Systems	Scale from 56 to 200 TB usable local capacity* and up to 600 TB? including Cloud Bank Storage. Backup speeds up to 25 TB/hr*

The StoreOnce portfolio consists of a range of high performance, single node, physical and virtual data protection appliances. For help with choosing the most appropriate StoreOnce System for your specific environment, we recommend you talk to your Hewlett Packard Enterprise partner or sales advisor.
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Notes:

− *In all cases, actual performance is dependent upon configuration, data set type, compression levels, number of data streams, number of devices emulated and number of concurrent tasks, such as housekeeping or replication and storage configuration. Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.

− Cloud Bank Storage is supported for use as a Catalyst Copy target. The performance of object storage means it is not supported to use Cloud Bank Storage as a backup target.

Standard Features

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 span from an entry level 16 TB model to an enterprise class model with 1.7 PB that can be expanded to 5.2 PB with Cloud Bank Storage depending on generation and model.

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Choose from dedicated backup appliances to match the capacity and performance requirements of larger offices and data center deployments or virtual appliances utilizing existing infrastructures for virtualized environments and smaller and remote offices.

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StoreOnce deduplication can be extended across cloud storage to create a hybrid backup infrastructure. StoreOnce Catalyst can be scaled out over your choice of on premise or cloud object storage to increase capacity and reduce the cost of backup data that requires extended retention times.

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Notes: 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.

Meeting shrinking backup windows

Industry leading performance - protect large amounts of data within short backup windows with native high performance or the enhanced speed of HPE StoreOnce Catalyst.

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Reduce the risk with industry-leading backup speeds of up to 288 TB/hr* with an HA federated 8 node system using StoreOnce VSA so you can shrink backup windows and meet the most stringent SLAs.

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You can enhance performance by deduplicating anywhere; at the application source or at the backup server or at the target HPE StoreOnce System. Federated Deduplication means you can deduplicate where it makes sense for your business, not where technology vendor limitations mandate. Federated Deduplication is available across all HPE StoreOnce systems, in conjunction with all applications that support StoreOnce Catalyst.

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Notes:

– 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.

– Values may differ from those used in calculations in the sizer tool.

Reducing the time to restore data

High speed backup is important, but when system failure strikes being able to restore your data in the shortest time possible is critical to minimizing downtime. That's why Hewlett Packard Enterprise offers industry-leading restore speeds with its StoreOnce product line.

Standard Features

Freeing up your IT resources

Reduce the time spent managing multiple data protection devices and processes and free-up IT resources by consolidating and automating all of your backup data onto HPE StoreOnce systems.
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For organizations that have branch and small offices, HPE StoreOnce helps you protect the data at remote sites.? You can eliminate the need for dedicated hardware if you use StoreOnce VSA at these sites.

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Lowering the cost of data protection

With a typical deduplication ratio of 20:1, more backup data can be stored in a smaller footprint meaning less capacity needs to be purchased. What's more, the highly scalable HPE StoreOnce portfolio allows you to pay-as-you grow.?
HPE StoreOnce deduplication also enables network efficient offsite data replication. All HPE StoreOnce systems use StoreOnce Federated data deduplication to significantly reduce the amount of data that needs to be replicated, enabling the use of lower bandwidth, lower cost links to transmit data offsite.?
StoreOnce enabled replication opens the way to cost-effective centralized backup from remote sites or branch offices, and delivers a consolidated disaster recovery solution for the data center.
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Lowering the cost of long term backup data retention

Cloud Bank Storage extends the usable capacity of StoreOnce by combining low object storage costs with StoreOnce deduplication in a hybrid cloud solution. This massively reduces the storage costs of long term backup data retention and enables off site data protection without investing in offsite facilities. This is delivered by an extension to StoreOnce Catalyst that leverages public cloud and/or private object storage. This external object storage is used to provide capacity to the Catalyst Cloud Bank Store. This integrates seamlessly into existing workflows. Backup data is written to a Catalyst Store and then, within the policy of the writing application, all or some of this backup data is copied to the Catalyst Cloud Bank Store for long term retention.?

Notes: Cloud Bank Storage is supported for use as a Catalyst Copy target. The performance of object storage means it is not supported to use Cloud Bank Storage as a backup target.
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Reducing the risk to Data at Rest and Data in Flight**

With high-profile reports of data loss, and increasing levels of government legislation for data security, companies are increasingly seeking to encrypt their data. The HPE StoreOnce security 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 is available for all HPE StoreOnce products.?
Data in flight encryption is supported to secure links between devices for StoreOnce Replication, Low Bandwidth Catalyst Copy and Low Bandwidth Catalyst backup operations. It is not recommended to use IPsec if performing regular restores (including Veeam BCJ) or tape offloads. It is possible write performance may be impacted when using IPsec, however performance improvements should be seen after first ingest.?
Using Data In Flight Encryption for VTL/NAS direct backup operations to the StoreOnce System over a local network is not supported due to the performance impact.?

Notes: **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.

Standard Features

Seamlessly integrating into your environment

Flexible backup is available with NAS, (NFS, CIFS (SMB), iSCSI and FC virtual tape libraries (VTL) and StoreOnce Catalyst backup targets. This allows each StoreOnce system to be installed and used with all leading backup applications.

Flexible connectivity enables fast, easy integration into Fibre Channel (16 Gb and 32 Gb) and Ethernet (1 Gb, 10 and 25 GbE? iSCSI) networks. HPE StoreOnce systems are easily rack-mounted in standard racks.,

Extensive compatibility

Hewlett Packard Enterprise extensive compatibility testing program assures that your HPE Systems work with leading, operating systems, data protection software and business application. ?

Please consult: **http://www.hpe.com/Storage/StoreOnceSupportMatrix** for specific compatibility information.

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Delivering reliable backup and restore

In any storage system it is essential to ensure that the integrity of the data stored is maintained so data can be recovered exactly as it was written.? There's nothing worse than discovering corrupted backups when you need to restore your data, consequently StoreOnce Systems include HPE StoreOnce Integrity Plus - industry leading patented technology to deliver data integrity throughout the lifecycle. With Integrity Plus you get inbuilt protection which not only checks data at many stages both in the backup process and when recovered, but also continually checks the data when at rest, correcting errors if necessary.?

Additionally, HPE StoreOnce systems feature hardware RAID 6 to reduce the risk of data loss due to disk failure.

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 Primera, 3PAR StoreServ, and Nimble primary storage with StoreOnce System storage directly without the need for third-party ISVs. With Recovery Manager Central you get the simplicity and performance of snapshot-based protection to generate application-consistent recovery points combined with the reliability and efficiency of deduplicated backups for guaranteed recovery.

Protecting your remote offices

HPE StoreOnce systems are ideal for remote offices - providing a local backup target and efficient replication to an offsite location. If you are running a virtual server environment in our remote offices you can use the flexibility and simplicity of the HPE StoreOnce VSA.

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

Eliminate complexity with effortless management

Reduce operational time, complexity and expense with a unified view of multiple StoreOnce systems, both on premises and in the cloud via Federated Management.

Standard Features

HPE StoreOnce 3620 System

Product Specifications	StoreOnce 3620
Form Factor	2U Rack
Total capacity (raw)**	48 TB
Local usable capacity**	Up to 31.5 TB
Effective local usable capacity**	Up to 630 TB (with 20:1 deduplication)
Maximum Cloud Bank Storage usable capacity**	63 TB
Effective Cloud Bank Storage capacity**	1.26 PB (with 20:1 deduplication)
Effective total usable capacity**	1.9 PB (with 20:1 deduplication)
Maximum write performance*	6 TB/hour
Maximum Catalyst write performance*	14 TB/hour
Maximum fan-in/backup targets	24

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Notes:

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

– Actual performance depends on multiple factors including configuration, data type, data deduplication, data compression, number of data streams, number backup targets and concurrent tasks such as housekeeping or replication.

– ** Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.

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HPE StoreOnce 3640 System

Product Specifications	StoreOnce 3640
Form Factor	2U Scalable Rack
Total capacity (raw)**	Up to 144 TB
Maximum local usable capacity**	Up to 108 TB
Effective local usable capacity**	2.16 PB (with 20:1 deduplication)
Maximum Cloud Bank Storage usable capacity**	216 TB
Effective Cloud Bank Storage capacity**	4.32 PB (with 20:1 deduplication)
Effective total usable capacity**	6.48 PB
Maximum write performance*	7 TB/hour
Maximum Catalyst write performance*	18 TB/hour
Maximum fan-in/backup targets	24

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Standard Features

HPE StoreOnce 3660 System

Product Specifications	StoreOnce 3660
Form Factor	2U Scalable Rack
Total capacity (raw)**	Up to 272 TB
Maximum local usable capacity**	Up to 200 TB
Effective local usable capacity**	4 PB (with 20:1 deduplication)
Maximum Cloud Bank Storage usable capacity**	400 TB
Effective Cloud Bank Storage capacity**	8 PB (with 20:1 deduplication)
Effective total usable capacity**	12 PB
Maximum Catalyst write performance*	25TB/hour
Maximum fan-in/backup targets	24

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Notes:

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

−*Actual performance depends on multiple factors including configuration, data type, data deduplication, data compression, number of data streams, number backup targets and concurrent tasks such as housekeeping or replication.

−** Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.

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HPE StoreOnce 5200 System

Product Specifications	StoreOnce 5200
Form Factor	4U Scalable Rack
Total capacity (raw)**	Up to 288 TB
Maximum local usable capacity**	Up to 216 TB
Effective local usable capacity**	4.32 PB (with 20:1 deduplication)
Maximum Cloud Bank Storage usable capacity**	432 TB
Effective Cloud Bank Storage capacity**	8.6 PB (with 20:1 deduplication)
Effective total usable capacity**	13 PB
Maximum write performance*	17 TB/hour
Maximum Catalyst write performance*	33 TB/hour
Maximum fan-in/backup targets	32

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Notes:

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

−* Actual performance depends on multiple factors including configuration, data type, data deduplication, data compression, number of data streams, number backup targets and concurrent tasks such as housekeeping or replication.

−** Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.

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Standard Features

HPE StoreOnce 5250 Systems	
Overview Product Specifications	**StoreOnce 5250**
Form Factor	7U to 12U Scalable Rack
Total capacity ** **(raw)**	Up 1120 TB
Total Maximum local usable capacity **	Up to 864 TB
Effective local usable capacity **	17.3 PB (with 20:1 deduplication)
Max Cloud Bank Storage usable capacity **	1.7 PB
Effective Cloud Bank Storage capacity **	34 PB (with 20:1 deduplication)
Maximum total usable capacity **	51 PB (with 20:1 deduplication)
Maximum write performance *	22 TB/hour
Maximum Catalyst write performance *	41 TB/hour
Maximum fan-in/backup targets	32/64

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HPE StoreOnce 5260 Systems	
Overview Product Specifications	**StoreOnce 5260**
Form Factor	4U to 10U Scalable Rack
Total capacity ** **(raw)**	Up 768 TB
Total Maximum local usable capacity **	Up to 576 TB
Effective local usable capacity **	11.5 PB (with 20:1 deduplication)
Max Cloud Bank Storage usable capacity **	1.1 PB
Effective Cloud Bank Storage capacity **	23 PB (with 20:1 deduplication)
Maximum total usable capacity **	34 PB (with 20:1 deduplication)
Maximum Catalyst write performance *	60TB/hour
Maximum fan-in/backup targets	32

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Standard Features

Notes:

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

− * Actual performance depends on multiple factors including configuration, data type, data deduplication, data compression, number of data streams, number backup targets and concurrent tasks such as housekeeping or replication.

− ** Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.

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HPE StoreOnce 5650 Systems

Product Specifications?	StoreOnce 5650
Form Factor	7U to 22U Scalable Rack
Total capacity** (raw)	Up 2240 TB
Total Maximum local usable capacity**	Up to 1.7 PB
Effective local usable capacity*	34 PB (with 20:1 deduplication)
Max Cloud Bank Storage usable capacity**	3.5 PB
Effective Cloud Bank Storage capacity**	70 PB (with 20:1 deduplication)
Maximum total usable capacity**	104 PB (with 20:1 deduplication)
Maximum write performance*	27 TB/hour
Maximum Catalyst write performance*	47 TB/hour
Maximum fan-in/backup targets	50/192

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HPE StoreOnce 5660 Systems

Product Specifications?	StoreOnce 5660
Form Factor	4U to 18U Scalable Rack
Total capacity** (raw)	Up 1.5 PB
Total Maximum local usable capacity**	Up to 1.1 PB
Effective local usable capacity*	22 PB (with 20:1 deduplication)
Max Cloud Bank Storage usable capacity**	2.2 PB
Effective Cloud Bank Storage capacity**	66 PB (with 20:1 deduplication)
Maximum total usable capacity**	88 PB (with 20:1 deduplication)
Maximum Catalyst write performance*	105 TB/hour
Maximum fan-in/backup targets	50

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Standard Features

Notes:
- See Detailed Technical Specifications and Physical Dimensions later in this document for more details.
- *Actual performance depends on multiple factors including configuration, data type, data deduplication, data compression, number of data streams, number backup targets and concurrent tasks such as housekeeping or replication. Actual capacity depends on multiple factors including data deduplication, data compression, storage formatting, log file size, meta data size and housekeeping backlog.
- ** Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.

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Software Options
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HPE StoreOnce Catalyst

HPE StoreOnce Catalyst is a data protection optimized interface unique to HPE StoreOnce Systems. It provides higher performance and more flexible control than traditional emulated tape (VTL) targets or NAS Shares. This means that you can benefit from:?

- Simplified management of data movement from a single pane of glass: tighter integration with your backup application to centrally manage file replication across the enterprise.
- Inline deduplication and compression
- Seamless control across complex environments: supporting a range of flexible configurations that enable the concurrent movement of data from one site to multiple sites, and the ability to cascade data around the enterprise (sometimes referred to as multi-hop).
- Enhance performance: distributed deduplication processing using StoreOnce Catalyst stores on the StoreOnce systems and on multiple servers can optimize loading and utilization of backup hardware, network links and backup servers for faster deduplication and backup performance.
- Scale out with external object storage to augment the local System storage with the Cloud Bank extension to Catalyst.
- Faster time to backup to meet shrinking backup windows: up to 288 TB/hour* aggregate throughput.
- StoreOnce Catalyst prevents exposure of backup copies to ransomware.?

Catalyst over Fibre Channel (CoFC) provides the same benefits as Catalyst over Ethernet (CoE) via a Fibre Channel fabric. Catalyst copy over Fibre Channel (CCoFC) utilizes Fibre Channel to transmit copies between StoreOnce Systems. CoFC and CCoFC are useful for customers that have invested in Fibre Channel infrastructure and/or do not want to expand their Ethernet capacity.

Cloud Bank Storage

Cloud Bank Storage is an extension to StoreOnce Catalyst that combines the low cost of object storage with the storage efficiency of StoreOnce deduplication. It connects to external object storage to provide capacity for the Catalyst Cloud Bank store. Using external storage in addition to the local System storage can triple the effective capacity of the StoreOnce System. Through cloud optimized data transfer and storage, Cloud Bank Storage minimizes cloud transfer and storage costs. The primary use case is to backup to a Catalyst Store and copy the backup data to a Cloud Bank store for low cost long term retention.

Many public cloud providers and on premise object storage systems are supported with Cloud Bank Storage. See the **HPE StoreOnce Support Matrix** ?for details.?

Cloud Bank Storage is a licensed feature. The licenses are available in 1 TB increments. Licenses are added in any multiple of 1 TB up to the maximum Cloud Bank Storage capacity for that System. See the table below for the maximum supported Cloud Bank Storage capacities for each model. The licensed capacity is the capacity written to the all the Cloud Bank Storage after deduplication and compression.?

Cloud Bank Storage Capacities

Standard Features

Cloud Bank Storage can treble the usable capacity of StoreOnce systems. The Cloud Bank Storage Detach option can further extend this, practically without limits, by enabling capacity to be recycled. System resources, particularly memory, are needed to support Cloud Bank Storage, in the same way that they are needed to support local storage. To use large capacities of Cloud Bank Storage a memory upgrade is required.
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Cloud Bank Storage Capacity
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Standard System Configuration			
Appliance Generation	Model	Maximum local storage	Maximum total usable Capacity? (maximum local storage + maximum cloud bank storage)
HPE StoreOnce Gen4 Appliances	StoreOnce 5650	1.7 PB	5.2 PB
	StoreOnce 5250	864 TB	2.6 PB
	StoreOnce 5200	216 TB	648 TB
	StoreOnce 3640	108 TB	324 TB
	StoreOnce 3620	31.5 TB	94.5 TB
HPE StoreOnce Gen4+ Appliances	StoreOnce 5660	1.1PB	3.4 PB
	StoreOnce 5260	576 TB	1.7 PB
	StoreOnce 3660	200TB	600 TB

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Notes: Unlike legacy products, current products no longer require a memory upgrade
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Cloud Bank Storage Detach Option
Many object storage vendors offer 'cold' tiers? that provide reduced cost. The performance of 'cold' tiers is not sufficient for Cloud Bank Storage operation. For Cloud Bank Storage Stores with backup data that will not need to be changed or updated the Store can be detached to enable it to be moved to a cold 'tier'.
The Cloud Bank Storage Detach option disconnects a Store from the host System and puts it into a read only state. It can then be moved, independently of StoreOnce or the backup application, to a 'cold' tier or other location for long term, low cost retention. If the detached Store needs to be read for a restore, or other requirement, it has to be moved back to a supported storage tier and reconnected to a StoreOnce System. This can be the original StoreOnce System or to another StoreOnce.?
Cloud Bank Storage Detach is a licensed feature. Licenses are available in 1 TB increments. Licenses are added, to a System with one or more Cloud Bank Storage licenses, in any multiple of 1 TB, with no upper limit. When a Store is detached, licenses equal to the capacity of the detached store are consumed and remain with detached Store. On detach the capacity of the detached store is available for other Cloud Bank stores.
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Maximum Values for Cloud Bank Storage Licenses
Up to a total of 50 Cloud Bank Storage and Cloud Bank Storage Detach license keys can be added to a System. The capacity enabled by a license key is specified using the **https://myenterpriselicense.hpe.com/cwp-ui/auth/login**. ?
The capacity is specified in 1 TB multiples. For the larger Systems, it is recommended to generate license keys with larger multiples of 1 TB to avoid this 50 license key limit becoming a constraint.
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Standard Features

Cloud Bank Storage Support Entitlement
Support for Cloud Bank Storage is entitled as part of the HPE Support entitlement for the StoreOnce System the Cloud Bank Storage licenses are installed on. No additional HPE Support Services are available or required.

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The HPE StoreOnce Catalyst is supported by:

- Veeam Backup & Replication (for supported versions see **http://www.hpe.com/Storage/StoreOnceSupportMatrix**
- Commvault (for supported versions see **http://www.hpe.com/Storage/StoreOnceSupportMatrix**
- BridgeHead Software (for supported versions see **http://www.hpe.com/Storage/StoreOnceSupportMatrix**
- Veritas NetBackup (via an HPE OST plug-in) available **http://www.hpe.com/storage/StoreOnce/VERITAS**
- Veritas Backup Exec (via an HPE OST plug-in available **http://www.hpe.com/storage/StoreOnce/VERITAS**
- Oracle RMAN (via an HPE plug-in) available from **http://www.hpe.com/storage/StoreOnce/OracleRMAN**
- Microsoft SQL Server (via HPE plug-in) available from **http://www.hpe.com/storage/storeOnce/SQLServer**
- SAP HANA (via HPE plug-in) available from http://www.hpe.com/storage/StoreOnce/SAP

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Catalyst Data Immutability
Catalyst Stores can be configured with a data immutability period. During the specified period, the backup application(s) accessing the Store will not be able to delete backups that have been retained for less than this specified period. This provides additional protection against malicious or unintended backup data deletion where the role of backup application administrator and StoreOnce System administrator are filled by different people. ?
See the **HPE StoreOnce Support Matrix** for backup software specific support for Catalyst data immutability.

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.

HPE Federated Management **

The new GUI includes: Federated Dashboard, System Dashboard, Data Services (Catalyst, NAS, VTL), Event log, Reports, Settings (add user privileges, user preferences, Active Directory/LDAP,?email notification, licenses, etc.) and help.?

Federated Management provides drill-down reporting into deduplication ratio, capacity usage for StoreOnce

Standard Features

Catalyst stores, VTL libraries, NAS shares, read/write throughput, replication throughput, stream count, CPU, memory, disk I/O and networking FC channel utilization, threshold alerts via email notification and CSV exporting capability for up to 100** Gen4 systems.

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Notes: **With StoreOnce 4.2 or later up to 40 StoreOnce systems can be managed in a federation using a single console. This can be increased up to 100 with agreement from HPE. Please make the request via your HPE representative if you want to manage more than 40 and up to 100 StoreOnce systems in a federation using a single console.

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HPE StoreOnce REST API

The StoreOnce REST API provides a well-defined RESTful application programming interface (API) that customers can use for integrating and automating reporting/management capabilities with StoreOnce appliances. The API 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 API also allow 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 API can be downloaded from **https://hewlettpackard.github.io/storeonce-rest/index.html**

HPE StoreOnce Security/Encryption

HPE StoreOnce security provides a Data at Rest and Data in Flight encryption solution, secure Data Shredding features and Data Immutability 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 systems and VSA use cryptographic algorithms and modules that have completed a FIPS 140-2 CAVP/CMVP (Cryptographic Algorithm Validation Program/Cryptographic Module Validation Program) validation.? These validated modules are active when the product is configured in FIPS mode thus HPE StoreOnce meets your FIPS 140-2 requirements by:
- Integrating NIST validated cryptographic module(s) into the product to ensure that critical cryptography uses the module(s) to provide cryptographic services;
- Using FIPS-validated cryptographic ciphers/functions
- 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
- It enables the StoreOnce System to request encryption keys from MicroFocus ESKM version 4.0 or greater or Gemalto SafeNet's KeySecure key manager using KMIP protocol for centralized encryption key management.
- Local Key Management is included with 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 Low Bandwidth StoreOnce Catalyst Backup, Catalyst Copy and Replication. Encryption is enabled via IPsec. In addition, write performance may be impacted, however performance improvements should be seen after first ingest.

Standard Features

- It is not recommended to use IPsec if performing regular restores (including Veeam BCJ) or tape offloads.
- 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

Service and Support

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**.?**
https://www.hpe.com/psnow/doc/4aa3-8083enw?jumpid=in_hpesitesearch

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.

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.?
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.
https://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA4-3821ENW.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.?
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. ?
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

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Service and Support

Warranty
Hewlett Packard Enterprise provides a 3 year parts exchange, 3 year labor, 3 year on site, normal business hours, next business day response for StoreOnce 3620, 3640, 3660, 5200, 5250, 5260, 5650 and 5660 systems.

HPE Services
No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.
https://www.hpe.com/services
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Consulting Services
No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps.? From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.?
https://www.hpe.com/services/consulting
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HPE Managed Services
HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.?
HPE Managed Services | HPE
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Operational services
Optimize your entire IT environment and drive innovation.? Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.
https://www.hpe.com/services/operational
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HPE Complete Care Service
HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts.? HPE Complete Care Service provides:

- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare
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Service and Support

HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.
https://www.hpe.com/services/techcare
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HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle.? A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Notes: To review the list of Lifecycle Services available for your product go to:
https://www.hpe.com/services/lifecycle?
For a list of the most frequently purchased services using service credits, see the **HPE Service Credits Menu**
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Other Related Services from HPE Services:
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HPE Education Services

Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject.? Schedule training in a way that works best for your business with flexible continuous learning options.
https://www.hpe.com/services/training
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Defective Media Retention

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.?
Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.
?

Service and Support

Parts and Materials

HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.?

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.
?

How to Purchase Services

Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at **https://ssc.hpe.com/portal/site/ssc/**

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AI Powered and Digitally Enabled Support Experience

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience.?

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.?

https://support.hpe.com/hpesc/public/home/signin

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are-the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner.? Contact information for a representative in your area can be found at "Contact HPE" **https://www.hpe.com/us/en/contact-hpe.html**?

For more information
http://www.hpe.com/services

Configuration Information

Purchasing information

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HPE StoreOnce 3620 24 TB Capacity Upgrade **?**

Description	SKU
HPE StoreOnce 3620 24TB Capacity Upgrade Kit	BB960A

Includes: ?

- 6 x 4 TB preconfigured disks
- 1 x StoreOnce 3620 24 TB Capacity Upgrade License Entitlement Certificate
- Capacity Upgrade Start Here Guide

Scalability

Start out with the HPE StoreOnce base unit at 2U with 16 TB usable**. When you're ready, simply purchase a capacity upgrade kit to increase available local capacity to a total of 31.5 TB usable*. Cloud Bank Storage can extend the maximum Catalyst capacity by 63 TB using external object storage for a total usable capacity of 94.5 TB. ?

Notes:

− See Detailed Technical Specifications and Physical Dimensions later in this document for more details.
− **Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.

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HPE StoreOnce 5650 System

Includes

- HPE StoreOnce 5650 System
  (no data disks)
- Easy Install Rail Kit
- EAC Card
- Accessory Kit featuring:
- Start Here Poster
- 2 x Ethernet cables (Cat 5e) 3m
- 2 x Power cords (IEC 320 C13 Connector for Rack PDU)
- Start Here Poster

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Configuration Information

HPE StoreOnce Gen4+ Purchasing information
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HPE StoreOnce 3660 80 TB System

Description	SKU
HPE StoreOnce 3660 80TB Base System	R6U02A

Includes

- HPE StoreOnce 3660 System (2U) with10 x 8 TB disks
- Easy Install Rail Kit
- EAC Card
- Accessory Kit featuring:
- Start Here Poster
- 2 x Ethernet cables (Cat 5e) 3m
- 2 x Power cords

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HPE StoreOnce 3660 96 TB Capacity Upgrade

HPE StoreOnce 3660 96TB Upgrade Kit	R7M22A

Includes

- Primera 600 LFF storage enclosure (2U) with 12 x 8 TB disks, redundant power supplies and fan modules, 1 x integrated 12Gb SAS IO Module
- Rail Kit
- SAS cabling included
- Accessory Kit featuring:
- 2 x Power cords
- 1 x StoreOnce 3660 96 TB Capacity Upgrade License Entitlement Certificate
- Capacity Upgrade Start Here Guide

Notes:

– HPE StoreOnce 3660 systems can be connected to the servers they protect via 1 GbE as well as 10 and 25 GbE, 16 and 32 Gb Fibre Channel when the appropriate optional hardware is installed.

– They are supported on all 10 and 25 GbE network interface cards (NICs) and switches, dependent on the optional network card installed. 1GbE network connections are also supported for sites without 10 and 25 GbE networks (with reduced performance).

– HPE StoreOnce Gen4+ systems are supported on 1GB and 10GB 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.

– Also refer to the Software Options section of this QuickSpecs to add licenses for:

– HPE StoreOnce Encryption

– HPE Cloud Bank Storage

– Also refer to section detailing Network/Fibre Channel Cards:

– HPE StoreOnce Gen4+ 10 GbE-T 2-port Adapter

– HPE StoreOnce Gen4+ 10/25Gb Adapter

– HPE StoreOnce 16 Gb Fibre Channel Card

– HPE StoreOnce 32Gb Fibre Channel Card

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

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Configuration Information

Scalability

Start out with the HPE StoreOnce 3660 80 TB base unit (raw) at 2U with 56 TB usable*****. When you're ready, simply purchase up to 2 additional capacity upgrade kits to increase available local capacity to a total of 200 TB usable*****. Cloud Bank Storage can extend the maximum Catalyst capacity by 400 TB using external object storage for a total usable capacity of 600 TB. ?

Notes: *Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.

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HPE StoreOnce 5260 System

Description	SKU
HPE StoreOnce 5260 Base System	R6U03A

Includes

- HPE StoreOnce 5260 System (2U) with 2 x 1.9TB SSDs for OS and 8 x 3.2 TB SSD disks for Data Cache
- Easy Install Rail Kit
- EAC Card
- Accessory Kit Featuring:
- Start Here Poster
- 2 x Ethernet cables (Cat5e) 3m
- 2 x Power cords (with C14 inlet power connector Rack PDU)

?

HPE StoreOnce 5260/5660 192 TB Capacity Upgrade

HPE StoreOnce 5260/5660 192TB Upgrade Kit	R7M23A

Includes

- Primera 600 LFF storage enclosure (2U) with 12 x 16 preconfigured TB disks, redundant power supplies and one dual integrated SAS I/O module and fan modules.
- Rail Kit
- SAS cabling included
- Accessory Kit featuring:
  - 2 x Power cords
  - 1 x StoreOnce 5260/5660 192 TB Capacity Upgrade License Entitlement Certificate?
  - Capacity Upgrade Start Here Guide

Notes:

- HPE StoreOnce 5260 systems can be connected to the servers they protect via 1 GbE as well as 10 and 25 GbE, 16 and 32 Gb Fibre Channel when the appropriate optional hardware is installed.
- They are supported on all 10 and 25 GbE network interface cards (NICs) and switches, dependent on. 1GbE network connections are also supported for sites without 10 and 25 GbE networks (with reduced performance).
- HPE StoreOnce Gen4+ systems are supported on 1GB and 10GB 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.
- Also refer to the Software Options section of this QuickSpecs to add licenses for:
- HPE StoreOnce Encryption
- HPE Cloud Bank Storage
- Also refer to section detailing Network/Fibre Channel Cards:
- HPE StoreOnce Gen4+ 10 GbE-T 2-port Adapter

Configuration Information

- HPE StoreOnce Gen4+ 10/25Gb Adapter
- HPE StoreOnce 16 Gb Fibre Channel Card
- HPE StoreOnce 32Gb Fibre Channel Card
- A total number of 4 in any combination can be used.

Scalability

Start out with the HPE StoreOnce 5260 base unit and first capacity upgrade kit at 4U with 144 TB* usable capacity. . When you're ready, simply purchase up to 3 additional capacity upgrade kits to increase available local capacity to a total of 576 TB usable. Cloud Bank Storage can extend the maximum Catalyst capacity by 1.1 PB? using external object storage for a total usable capacity of 1.7 PB. ?

Notes: *Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.

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HPE StoreOnce 5660 System

Description	SKU
HPE StoreOnce 5660 Base System	R6U04A

Includes

- HPE StoreOnce 5660 System with 2 x 1.9TB SSDs for OS and 8 x 6.4 TB SSD disks for Data Cache
- Easy Install Rail Kit
- EAC Card
- Accessory Kit featuring:
- Start Here Poster
- 2 x Ethernet cables (Cat 5e) 3m
- 2 x Power cords (with C14 inlet power connector for Rack PDU

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HPE StoreOnce 5260/5660 192 TB Drawer/Capacity Upgrade Kit

HPE StoreOnce 5260/5660 192TB Upgrade Kit	R7M23A

Includes

- Primera 600 LFF storage enclosure (2U) with 12 x 16 TB data disks, 192 TB (RAW), redundant power supplies and one dual integrated SAS I/O module and fan modules.
- Rail Kit
- SAS cabling included
- Accessory Kit featuring:
- 2 x Power cords
- 1 x StoreOnce 5260/5660 192 TB Capacity Upgrade License Entitlement Certificate (R7M23A)
- Capacity Upgrade Start Here Guide

Notes:

- HPE StoreOnce 5660 systems can be connected to the servers they protect via a 10 or 25 GbE, 16 or 32 Gb Fibre Channel hardware options. The StoreOnce 5660 systems can support up to four of any combination of the 10 or 25 GbE, 16Gb and 32Gb FC connectivity hardware options.
- They are supported on all 10 and 25 GbE network interface cards (NICs) and switches when configured with the 10GbE hardware option. Default 1Gb base-T Ethernet network connections are also supported for sites without 10 or 25 GbE networks (with reduced performance).
- HPE StoreOnce Gen4+ systems are supported on 1GB and 10GB 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.

Scalability

Start out with the HPE StoreOnce 5660 base unit and one capacity upgrade kit at 4U for 144 TB* usable capacity.? When you're ready, simply purchase up to 7 additional capacity upgrade kits to increase available

Configuration Information

local capacity to a total of 1.1 PB usable. Cloud Bank Storage can extend the maximum Catalyst capacity by 2.3 PB using external object storage for a total usable capacity of 3.4 PB.?

Notes:
- *Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.

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HPE StoreOnce Catalyst Cloud Bank Storage Ordering Information

Cloud Bank Storage is a licensed based on usable capacity. For all StoreOnce appliances and StoreOnce VSAs, 1 TB licenses are added, in any multiple of 1 TB, up to the maximum for that System.?

For StoreOnce VSAs connected to an AutoPass License Server, licenses are added to the license server in 100 TB increments. This capacity is then allocated in 1 TB multiples to the StoreOnce VSAs connected to the license server.

The license entitlement is used to acquire the license key at: **https://myenterpriselicense.hpe.com/cwp-ui/auth/login**

For StoreOnce appliances: **https://myenterpriselicense.hpe.com/cwp-ui/auth/login**

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License E-LTU	?
Description	**SKU**
HPE StoreOnce Cloud Bank Storage Read/Write for Gen4 Systems 1TB E-LTU	BC012AAE
HPE StoreOnce Cloud Bank Storage Detach for Gen4 Systems 1TB E-LTU	BC013AAE
License LTU	**?**
HPE StoreOnce Cloud Bank Storage Read/Write for Gen4 Systems 1TB LTU	BC012A
HPE StoreOnce Cloud Bank Storage Detach for Gen4 Systems 1TB LTU	BC013A

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HPE StoreOnce Security/Encryption

HPE StoreOnce Data Immutability mitigates risk with added protection against malicious or accidental backup data deletion (see Catalyst Data Immutability for more information)?

Notes: Federal Information Processing Standard 140-2 (FIPS 140-2), defines the technical requirements to be used by Federal Agencies when cryptographic-based security is required for protection of sensitive or valuable data. ?

For more details of the FIPS Security Policy please go to **https://csrc.nist.gov/CSRC/media/projects/cryptographic-module-validation-program/documents/security-policies/140sp3018.pdf** ?

Ordering Information

A license is required to enable the encryption capabilities for each HPE StoreOnce system or VSA. All other security features do not require a license.

Model / license for Encryption License eLTU	?
Description	**SKU**
HPE StoreOnce Encryption E-LTU	BB994AAE
HPE StoreOnce VSA Server Encryption E-LTU	BC007AAE
Model / license for Encryption License	**?**
HPE StoreOnce Encryption LTU	BB994A
HPE StoreOnce VSA Server Encryption LTU	BC007A

Configuration Information

HPE 10GbE and 16/32Gb FC Connectivity
The following cables are recommended for HPE 10GbE and 16/32Gb Fibre Channel connectivity.
Notes: Optical 16Gb FC, 32Gb FC, and 10GbE SFP transceivers are included in the StoreOnce kits. Separate purchase NOT required.

HPE 25GbE Connectivity
The following transceiver and cables are required for HPE 25GbE SFP connectivity.

HPE 25Gb SFP28 SR 100m Transceiver | 845398-B21

Notes: Optical 25GbE SFPs are NOT included in the StoreOnce 10/25GbE Network Card kits. Separate purchase required. Two(2) per card.

Fiber Optic Cables
The following cables are recommended for all 16/32Gb Fibre Channel and 10/25GbE SFP connectivity.

HPE OM3 Cables

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

HPE PremierFlex OM4 Fiber Optic Cables

HPE Premier Flex LC/LC Multi-mode OM4 2 Fiber 1m Cable	QK732A

Notes: Fiber cables must be purchased separately for fiber-optic environments.

Direct Attach Copper Cables
The following cables are supported for 25GbE and 10GbE SFP direct attach copper connectivity.

25GbE SFP Connectivity

HPE 25Gb SFP28 to SFP28 3m Direct Attach Copper Cable	844477-B21
HPE 25Gb SFP28 to SFP28 5m Direct Attach Copper Cable	844480-B21

10GbE SFP Connectivity (New H3C switches)

HPE Networking X240 10G SFP+ SFP+ 0.65m DAC Cable	JD095C
HPE Networking X240 10G SFP+ SFP+ 1.2m DAC Cable	JD096C
HPE Networking X240 10G SFP+ SFP+ 3m DAC Cable	JD097C

Notes: Direct Attach Cable (DAC) must be purchased separately for copper environments.

Direct Attach CAT 6A Cables
The following cables are recommended for 10GBASE-T connectivity.

Direct Attach Cables

HPE Synergy Frame Link Module CAT6A 1.2m Cable	861412-B21
HPE Synergy Frame Link Module CAT6A 3m Cable	861413-B21

Notes: Direct Attach Cable (DAC) must be purchased separately for CAT 6A twisted pair environments.

Flexible I/O Options - Network/Fibre Channel Cards

Configuration Information

HPE StoreOnce Appliances enable users to choose up to four I/O optional interfaces from the following:

- 10/25Gb Ethernet
- 10Gb BaseT Ethernet
- 16Gb Fibre Channel
- 32GB Fibre Channel?

Any combination of interfaces can be selected but must be installed in the correct slots. All flexible I/O cards have dual ports. ?The interfaces are licensed and entitlement certificated are supplied with the product. Factory installed interfaces have licenses pre-installed. Interfaces are supported on StoreOnce 3620/3640/3660/5200/5250/5260/5650 and 5660

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Description	SKU
HPE StoreOnce Gen4 10/25Gb SFP Network Card	BB982A
Notes: 10Gb SFP only supplied with product	?
HPE 25Gb SFP28 SR 100m Transceiver	845398-B21
HPE StoreOnce Gen4 10GbE-T Network Card	BB984A
HPE StoreOnce Gen4 16Gb Fibre Channel Network Card	BB986A
HPE StoreOnce Gen4 32Gb Fibre Channel Network Card	BB990A
HPE StoreOnce Gen4 Plus 10/25Gb 2-port SFP Adapter	R7M24A
	R7M25A

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Flexible Installation and Startup SKU's And Option Bands

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HPE StoreOnce36xx, 52xx, 5250 and 56xx System Installation and Startup service

? ?

Fixed Service SKU ?

HPE Storeonce 36xx Capacity Upgrade Startup Service	H7RC8E
HPE Storeonce 5200 Startup Service	H7RC9E
HPE Storeonce 5200 Capacity Upgrade Startup Service	H7RD0E

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Flexible Service ?

HPE StoreOnce 36xx Stup SVC	HA124A1#5VF
HPE StoreOnce 36xx Cap Upg Stup SVC	HA124A1#5VG
HPE StoreOnce 52xx Stup SVC	HA124A1#5VL
HPE StoreOnce 52xx Cap Upg Stup SVC	HA124A1#5VN
HPE StoreOnce 52/56xx Stup SVC	HA124A1#5WQ
HPE StoreOnce Addl 1 day Startup SVC	HA124A1#5V0
HPE StoreOnce 52/56xx0 Drwr Upg Stup SVC	HA124A1#5WS
HPE StoreOnce 52/56xx Cap Upg Stup SVC	HA124A1#5X2

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Installation and Startup Service: **https://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA2-9557ENW.pdf**

Advanced start-up services

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Configuration Information

HPE StoreOnce Catalyst and Replication Solution Service

HPE StoreOnce Catalyst Solution and Replication Solution Services. They provide a best practice configuration and verification service in the Customer environment to optimize the benefits of deploying Replication and\or Catalyst functionality. These service are available in 3 levels. Within the scope of the service, StoreOnce VSA configuration can be part of the solution service.

Description	SKU
HPE StoreOnce Catalyst solution service lvl1	HA124A1#5TY
HPE StoreOnce Catalyst solution service lvl2	HA115A1#5TZ
HPE StoreOnce Catalyst solution service lvl3	HA115A1#5UO

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

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Replication Solution Service: **http://h20195.www2.hpe.com/V2/GetPDF.aspx/4AA4-3945ENW.pdf**

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HPE StoreOnce single node Catalyst Startup Service

Combined with the HPE StoreOnce 36xx, 5200 and 52/56xx Installation and Startup Service, the HPE StoreOnce single node Catalyst Startup Service provides implementation and verification of the backup and remote copy features of HPE StoreOnce Catalyst. Within the scope of the service, StoreOnce VSA configuration can be part of the startup service.

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HPE StoreOnce single node Catalyst startup SVC	HA124A1#5T7

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

Catalyst single node startup service: **http://h20195.www2.hpe.com/v2/GetPDF.aspx/4aa4-9988ENW.pdf**

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HPE StoreOnce integration service

The StoreOnce Integration Services are intended to provide proven HPE best practice integration between the Customer's enterprise backup application and StoreOnce. This service helps customers utilize the advanced features of their backup software with StoreOnce for an optimized end-to-end solution.

https://h20195.www2.hpe.com/V2/GetPDF.aspx/4AA6-3678ENW.pdf

Description	SKU
HPE StoreOnce Integration Level 1 SVC	H8E02A1
HPE StoreOnce Integration Level 2 SVC	H8E03A1

Configuration Information

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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.
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Provides deployment of HPE 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 Recovery Manager Central (RMC) Solution for SAP HANAR on HPE 3PAR service is designed to assist in achieving a higher speed and lower cost backup in comparison to traditional backup applications
https://www.hpe.com/us/en/storage/rmc-backup.html

Description Flexible (Fixed)	SKU
HPE RMC for 3PAR and StoreVirtual VSA	HA124A1#5WD
• HPE Recovery Manager Central Installation and Startup Service(U7PE6E)	?
HPE RMC-V for 3PAR	HA124A1#5WE
• HPE Recovery Manager Central VMware for 3PAR Installation and Startup Service(U7PE7E)	?
HPE RMC-S for 3PAR	HA124A1#5ZB
• HPE Recovery Manager Central SQL Startup Service(U7VG3E)	?
HPE RMC-O for 3PAR	HA124A1#5ZG
• HPE Recovery Manager Central Oracle for 3PAR Installation and Startup Service(U7VG6E)	?
HPE RMC-E for 3PAR	HA124A1#5SD
• HPE Recovery Manager Central Exchange for 3PAR Startup Service(U7VG2E)	?
HPE RMC-SH single node for 3PAR	HA124A1#5F0
• HPE Recovery Manager Central SAP HANA single node for 3PAR Startup Service(H2UT0E)	?

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

Description	Support Service SKU	Per Event	Contractual
HPE StoreOnce Backup Sys HealthCheck SVC	HM006A1	HM006AE	HM006AC

?
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.
https://h20195.www2.hpe.com/v2/GetPDF.aspx/4AA4-3821ENW.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.

Configuration Information

Description	Support Service SKU	Per Event	Contractual
HPE HPSD Firmware Update Analysis SVC	HM001A1	HM001AE	HM001AC
HPE HPSD Firmware Update Implement SVC	HM002A1	HM002AE	HM002AC

?
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**

Technical Specifications

HPE StoreOnce Gen 4 Family Information					
?	StoreOnce 3620	StoreOnce 3640	StoreOnce 5200	StoreOnce 5250	StoreOnce 5650
Form Factor	2U Rack	2U up to 6U	7U up to 12U	4U up to 14U	7U up to 22U
Total Capacity (RAW)	48 TB	144 TB	288 TB	560 TB / 1120TB	1120 TB / 2240
Max Local Capacity (Usable*)**	31.5 TB	108 TB	216 TB	864 TB	1.7 PB
Max Cloud Bank Storage capacity	63 TB	216 TB	432 TB	1.7 PB	3.5 PB
Max Total capacity	94.5 TB	324 TB	648 TB	2.5 PB	5.2 PB
Logical capacity with 20: 1 deduplication	1.9 PB	6.48 PB	13 PB	50 PB	104 PB
Fan-in Max	24	24	32	32	50
Write Performance	6 TB/hr	7 TB/hr	17 TB/hr	22 TB/hr	27 TB/hr
?	(max aggregated data transfer rate using VTL)				
Read Performance	5 TB/hr	6 TB/hr	17 TB/hr	18 TB/hr	18 TB/hr
?	(max aggregated data transfer rate using VTL)				
Catalyst write performance	14 TB/hr	18 TB/hr	33 TB/hr	41 TB/hr	47 TB/hr
Emulation type	- For D2DBS Generic Libraries, tape drive types emulated are Ultrium-VT, LTO-2 thu LTO-7 - For EML and ESL E Series Libraries, tape drive types emulated are LTO-2 thu LTO-7 - For IBM-TS3500 Libraries, tape drive types emulated are IBM, LTO-3 and LTO-5 - For MSL G3 Series Libraries, tape drive types emulated are LTO-2 thu LTO-7				
Target types	HPE StoreOnce Catalyst, Virtual Tape Library (VTL) NAS (CIFS and NFS)				
Max targets (Catalyst, VTL NAS combined)	24	36	64	64	192
Maximum concurrent streams	128	192	512	512	1024
Max VTL Cartridges per Appliance	24,576	147,456	1,048,576	1,048,576	3,145,728
Max VTL cartridges per Library	1,024	4,096	16,384	16,384	16,384
I/O standard	4x 1GbitE				
Disk drives	4 TB	4 TB	4 TB	4/8 TB	4/8 TB

Technical Specifications

Number of Disk Drives	6	12	0 in base/12	0 in base/70	0 in base/70

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HPE StoreOnce Gen 4+ Family Information			
?	**StoreOnce 3660**	**StoreOnce 5260**	**StoreOnce 5660**
Form Factor	2U to 6U	4U to 10U	4U up to 18U
Total Capacity (RAW)	272 TB	768 TB	1.5 PB
Max Local Capacity (Usable***)	200 TB	576 TB	1.1 PB
Max Cloud Bank Storage capacity	400 TB	1.1 PB	2.2 PB
Max Total capacity	600 TB	1.7 PB	3.3 PB
Logical capacity with 20: 1 deduplication	1.8 PB	34 PB	66 PB
Fan-in Max	24	32	50
Catalyst write performance	25 TB/hr	60 TB/hr	105 TB/hr
Emulation Type	For D2DBS Generic Libraries, tape drive types emulated are Ultrium-VT, LTO-2 thu LTO-7 For EML and ESL E Series Libraries, tape drive types emulated are LTO-2 thu LTO-7 For IBM-TS3500 Libraries, tape drive types emulated are IBM, LTO-3 and LTO-5 For MSL G3 Series Libraries, tape drive types emulated are LTO-2 thu LTO-7		
Target Types	HPE StoreOnce Catalyst, Virtual Tape Library (VTL) NAS (CIFS and NFS)		
Max targets (Catalyst, VTL NAS combined)	36	64	128
Maximum concurrent streams	256	512	1024
Max VTL Cartridges per Appliance	147456	1048576	3145728
Max VTL cartridges per Library	4096	16384	16384
Max Drives per appliance	256	512	1024

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Notes:

– *** Actual usable capacity for customer data storage is dependent upon drive formatting, log file meta data size, housekeeping backlog and may differ from that which is used in calculations in the sizer tool.

– See the **http://www.hpe.com/Storage/StoreOnceSupportMatrix**

– StoreOnce VSA pages for more information.

Technical Specifications

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Model & usable capacity points (TB)[1]	SKU[2]	Usable Capacity[1]	Configuration comments
StoreOnce 3620			
16, 31.5	BB954A - HPE StoreOnce 3620 24TB System	16	Base product, 1 required
	BB960A - HPE StoreOnce 3620 24TB Capacity Upgrade Kit	16	Capacity expansion, min 0, max 1,? add to base (BB954A)
StoreOnce 3640			
36, 72, 108 **?**	BB955A - HPE StoreOnce 3640 48TB System	36	Base product, 1 required
	BB962A - HPE StoreOnce 3640 48TB Capacity Upgrade Kit	36	Capacity expansion, min 0, max 2,? add to base (BB955A)
StoreOnce 5200			
36, 72, 108, 144, 180, 216	BB956A - HPE StoreOnce 5200 Base System	0	Base product, no user storage, 1 required
	BB964A - HPE StoreOnce 5200 48TB Capacity Upgrade Kit	36	Capacity expansion, min 1, max 6,? add to base (BB956A)
StoreOnce 5250[3]			
with 4TB HDDs: 36, 72, 108, 144, 180,216, 252, 288, 324, 360, 396, 432 With 8TB HDDs: 72, 144, 216, 288, 360, 432, 504, 576, 648, 720, 792, 864	BB958A - HPE StoreOnce 5250 Base System	0	Base product, no user storage, 1 required
	BB966A - HPE StoreOnce 5250/5650 60TB Drawer/Capacity Upgrade Kit ?	36 ?	Part populated capacity expansion drawer with 4TB HDDs, min 1, max 2, add to base (BB958A)
	BB974A - HPE StoreOnce 5250/5650 44TB Capacity Upgrade Kit	36	4TB HDD pack for capacity expansion drawer min 0, max 5 per drawer (BB966A)
	BB968A - HPE StoreOnce 5250/5650 120TB Drawer/Capacity Upgrade Kit	72 ?	Part populated capacity expansion drawer with 8 TB HDDs, min 1, max 2, add to base (BB958A)
	BB976A - HPE StoreOnce 5250/5650 88TB Capacity Upgrade Kit	72	8TB HDD pack for capacity expansion drawer min 0, max 5 per drawer (BB968A)
StoreOnce 5650[4]			
With 4TB HDDs 36, 72, 108, 144, 180,216, 252, 288, 324, 360, 396, 432, 468, 504, 540, 576, 612, 648, 684, 720, 756, 792, 828, 864 With 8 TB HDDs 72, 144, 216, 288, 360, 432, 504, 576, 648, 720, 792, 864, 936, 1008, 1080, 1152, 1224, 1296,	BB959A - HPE StoreOnce 5650 Base System	0	Base product, no user storage, 1 required
	BB966A - HPE StoreOnce 5250/5650 60TB Drawer/Capacity Upgrade Kit ?	36 ?	Part populated capacity expansion drawer with 4TB HDDs, min 1, max 4, add to base (BB959A)
	BB974A - HPE StoreOnce 5250/5650 44TB Capacity Upgrade Kit	36	4TB HDD pack for capacity expansion drawer, min 0, max 5 per drawer (BB966A)
	BB968A - HPE StoreOnce 5250/5650 120TB Drawer/Capacity Upgrade Kit ?	72 ?	Part populated capacity expansion drawer with 8 TB HDDs, min 1, max 4, add to base (BB959A)

Technical Specifications

1368, 1440, 1512, 1584, 1656, 1728	BB976A - HPE StoreOnce 5250/5650 88TB Capacity Upgrade Kit	72	8TB HDD pack for capacity expansion drawer, min 0, max 5 per drawer (BB968A)
StoreOnce VSA[5]			
4 - 500 in 1TB increments	BC002AAE - HPE StoreOnce VSA 4TB Base eLTU	4	Base product, 1 required
	BC003AAE - HPE StoreOnce VSA Stackable 1TB eLTU	1	Capacity expansion, add individually or in multiples, min 0, max 496 per base product (BC002AAE)

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Notes:
- [1]This capacity is the user data capacity net of the RAID overhead. The actual usable capacity will be reduced by the file system and metadata storage.
- [2]SKU names include raw (not usable) capacity
- [3]StoreOnce 5250 solutions can be composed of a base system (BB958A) plus:
- 1 or 2 drawers with 4 TB HDDs (BB966A) or 8TB HDDs (BB968A)
- Each drawer can contain different capacity HDDs but all the HDDs in a drawer must be the same capacity
- [4]StoreOnce 5650 solutions can be composed of base system (BB959A) plus:
- 1, 2, 3 or 4 drawers with 4 TB HDDs (BB966A) or 8TB HDDs (BB968A)
- Each drawer can contain different capacity HDDs but all the HDDs in a drawer must be the same capacity

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Model & usable capacity points (TB)[1]	SKU[2]	Usable Capacity [1]	Configuration comments
StoreOnce 3660			
56, 128, 200 **?**	R6U02A- HPE StoreOnce 3660 80TB Base System ?	56	Base system has 56TB useable of HDD storage
	R7M22A- HPE StoreOnce 3660 96TB Upg Kit ?	72	Max system config can support Base plus 2 upgrade kits
StoreOnce 5260[3]			
144, 288, 432, 576	R6U03A- HPE StoreOnce 5260 Base System	0	Base product, 1 required
	R7M23A- HPE StoreOnce 5260/5660 192TB Upg Kit	144	Max system config can support up to 4 upgrade kits
StoreOnce 5660[4]			
144, 288, 432, 576, 720, 864, 1 PB, 1.1PB	R6U04A- HPE StoreOnce 5660 Base System	0	Base product, 1 required
	R7M23A- HPE StoreOnce 5260/5660 192TB Upg Kit	144	Max system config can support up to 8 upgrade kits
StoreOnce VSA[5]			
4 - 500 in 1TB increments	BC002AAE - HPE StoreOnce VSA 4TB Base eLTU	4	Base product, 1 required
	BC003AAE - HPE StoreOnce VSA Stackable 1TB eLTU	1	Capacity expansion, add individually or in multiples, min 0, max 496 per base product (BC002AAE)

Technical Specifications

Notes:
- [1]This capacity is the user data capacity net of the RAID overhead. The actual usable capacity will be reduced by the file system and metadata storage.
- [2]SKU names include raw (not usable) capacity
- [3]StoreOnce 5260 solutions can be composed of a base system plus one upgrade kit. Up to 3 (4 kits total) additional upgrade kits can be added for the max configuration
- Each drawer can contain different capacity HDDs but all the HDDs in a drawer must be the same capacity
- [4]StoreOnce 5660 solutions can be composed of a base system plus one upgrade kit. Up to 7(8 kits total) additional upgrade kits can be added for the max configuration
- Each drawer can contain different capacity HDDs but all the HDDs in a drawer must be the same capacity

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Power Requirements

All figures in the tables below reflect typical data center power configurations

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StoreOnce 5650

System	Qty D6020	HDD	208V A	W	VA	BTU/hr	220V A	W	VA	BTU/hr	240V A	W	VA	BTU/hr
Base	1	15	7.3	1486	1511	5066	7	1484	1520	5058	6.4	1485	1531	5064
1 Enc Max	1	70	10.7	2207	2227	7526	10.2	2204	2227	7514	9.4	2204	2241	7516
2 Enc Min	2	85	14.4	2954	2997	10070	13.7	2949	3008	10056	12.7	2951	3031	10063
2 Enc Max	2	140	17.9	3675	3713	12531	16.9	3669	3715	12511	15.6	3671	3741	12516
3 Enc Min	3	155	21.6	4421	4483	15076	20.5	4415	4495	15053	18.9	4418	4532	15063
3 Enc Max	3	210	25	5143	5199	17536	23.7	5135	5202	17509	21.9	5137	5242	17516
4 Enc Min	4	225	28.7	5889	5969	20081	27.2	5880	5982	20050	25.2	5884	6032	20063
4 Enc Max	4	280	32.2	6610	6685	22541	30.5	6600	6690	22506	28.1	6603	6742	22516

Notes: Worst case power usage when server and enclosure fans operate at max speed.

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StoreOnce 5250

System	Qty D6020	HDD	208V A	W	VA	BTU/hr	220V A	W	VA	BTU/hr	240V A	W	VA	BTU/hr
Base	1	15	6.8	1377	1402	4694	6.5	1375	1410	4687	6	1376	1422	4692
1 Enc Max	1	70	10.2	2098	2118	7154	9.7	2095	2119	7143	8.9	2096	2192	7145
2 Enc Min	2	85	13.9	2845	2888	9699	13.2	2840	2898	9684	12.2	2843	2923	9692
2 Enc Max	2	140	17.4	3566	3604	12159	16.4	3560	3606	12140	15.2	3562	3633	12145

Notes: Worst case power usage when server and enclosure fans operate at max speed.

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Technical Specifications

StoreOnce 5200

System	Qty D3650	HDD	208V A	W	VA	BTU/hr	220V A	W	VA	BTU/hr	240V A	W	VA	BTU/hr	
Base	1	12	4.3	877	891	2991	4.1	876	893	2987	3.8	877	900	2988	?
1 Enc Expansion	2	24	5.7	1140	1166	3888	5.4	1139	1171	3882	5	1140	1181	3886	?
2 Enc Expansion	3	36	7	1403	1442	4785	6.6	1401	1449	4778	6.1	1403	1464	4784	?
3 Enc Expansion	4	48	8.3	1666	1717	5681	7.9	1664	1727	5673	7.3	1666	1748	5681	?
4 Enc Expansion	5	60	9.6	1929	1992	6578	9.2	1927	2005	6569	8.5	1930	2032	6579	?
5 Enc Expansion	6	72	11	2192	2268	7475	10.4	2189	2283	7465	9.7	2193	2315	7477	?

Notes: Worst case power usage when server and enclosure fans operate at max speed.

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StoreOnce 3640

System	Qty D3650	HDD	208V A	W	VA	BTU/hr	220V A	W	VA	BTU/hr	240V A	W	VA	BTU/hr
Base	0	12	3	625	626	2130	2.9	624	626	2126	2.6	624	626	2126
1 Enc Expansion	1	24	4.4	888	902	3026	4.1	886	903	3022	3.8	887	910	3024
2 Enc Expansion	2	36	5.7	1151	1177	3923	5.4	1149	1181	3917	5	1150	1194	3921

Notes: Worst case power usage when server and enclosure fans operate at max speed.

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StoreOnce 3620

System	Qty HDD	208V A	W	VA	BTU/hr	220V A	W	VA	BTU/hr	240V A	W	VA	BTU/hr
Base	6	2.7	544	546	1854	2.5	543	545	1851	2.3	543	546	1852
1 Disk Pack Expansion	12	3	608	610	2074	2.8	607	609	2070	2.6	607	610	2070

Notes: Worst case power usage when server fans operate at max speed.

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Technical Specifications

StoreOnce 5660

System	Qty 600 LFF	HDD	208V A	W	VA	BTU/hr	220V A	W	VA	BTU/hr	240V A	W	VA	BTU/hr
Base	0	10 SSD	3.47	720.69	721.9	2457.55	3.28	719.57	721.16	2453.74	3.01	719.31	721.47	2452.85
?	?	?	4.7	977.61	978.47	3333.65	4.44	976.37	977.52	3329.42	4.07	976.12	977.15	3328.57
1 Enc Expansion	1	12	5.41	1121.85	1125.04	3825.5	5.12	1121.16	1125.65	3823.16	4.7	1119.95	1126.43	3819.03
?	?	?	6.64	1378.77	1381.61	4701.6	6.28	1377.96	1382.01	4698.84	5.76	1376.76	1382.11	4694.75
2 Enc Expansion	2	24	7.35	1523.01	1528.18	5193.45	6.96	1522.75	1530.14	5192.58	6.39	1520.59	1531.39	5185.21
?	?	?	8.58	1779.93	1784.75	6069.55	8.12	1779.55	1786.5	6068.26	7.45	1777.4	1787.07	6060.93
3 Enc Expansion	3	36	9.29	1924.17	1931.32	6561.4	8.8	1924.34	1934.63	6562	8.08	1921.23	1936.35	6551.39
?	?	?	10.52	2181.09	2187.89	7437.5	9.96	2181.14	2190.99	7437.68	9.14	2178.04	2192.03	7427.11
4 Enc Expansion	4	48	11.23	2325.33	2334.46	7929.35	10.64	2325.93	2339.12	7931.42	9.77	2321.87	2341.31	7917.57
?	?	?	12.46	2582.25	2591.03	8805.45	11.8	2582.73	2595.48	8807.1	10.83	2578.68	2596.99	8793.29
5 Enc Expansion	5	60	13.17	2726.49	2737.6	9297.3	12.48	2727.52	2743.61	9300.84	11.46	2722.51	2746.27	9283.75
?	?	?	14.4	2983.41	2994.17	10173.4	13.64	2984.32	2999.97	10176.52	12.52	2979.32	3001.95	10159.47
6 Enc Expansion	6	72	15.11	3127.65	3140.74	10665.25	14.32	3129.11	3148.1	10670.26	13.15	3123.15	3151.23	10649.93
?	?	?	16.34	3384.57	3397.31	11541.35	15.48	3385.91	3404.46	11545.94	14.21	3379.96	3406.91	11525.65
7 Enc Expansion	7	84	17.05	3528.81	3543.88	12033.2	16.16	3530.7	3552.59	12039.68	14.84	3523.79	3556.19	12016.11
?	?	?	18.28	3785.73	3800.45	12909.3	17.32	3787.5	3808.95	12915.36	15.9	3780.6	3811.87	12891.83
8 Enc Expansion	8	96	18.99	3929.97	3947.02	13401.15	18	3932.29	3957.08	134091.1	16.53	3924.43	3961.15	13382.29
?	?	?	20.22	4186.89	4203.59	14277.25	19.16	4189.09	4213.44	14284.78	17.59	4181.24	4216.83	14258.01

Notes: Worst case power usage when server fans operate at max speed.

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Technical Specifications

StoreOnce 5260

System	Qty 600 LFF	HDD	208V A	W	VA	BTU/hr	220V A	W	VA	BTU/hr	240V A	W	VA	BTU /hr
Base	0	10 SSD	3.18	660.04	661.35	2250.74	3	658.98	660.71	2247.13	2.76	658.8	661.29	2246.5
?	?	12	4.41	915.56	916.5	3122.06	4.16	914.34	915.6	3117.91	3.81	914.11	915.26	3117.11
1 Enc Expansion	1	24	5.12	1061.2	1064.49	3618.69	4.84	1060.57	1065.2	3616.55	4.45	1059.44	1066.25	3612.68
?	?	?	6.35	1316.72	1319.64	4490.01	6	1315.93	1320.09	4487.33	5.5	1314.75	1320.22	4483.29
2 Enc Expansion	2	36	7.06	1462.36	1467.63	4986.64	6.68	1462.16	1469.69	4985.97	6.14	1460.08	1471.21	4978.86
?	?	?	8.29	1717.88	1722.78	5857.96	7.84	1717.52	1724.58	5856.75	7.19	1715.39	1725.18	5849.47
3 Enc Expansion	3	48	9	1863.52	1870.77	6354.59	8.52	1863.75	1874.18	6355.39	7.83	1860.72	1876.17	6345.04
?	?	?	10.23	2119.04	2125.92	7225.91	9.68	2119.11	2129.07	7226.17	8.88	2116.03	2130.14	7215.65
4 Enc Expansion	4	60	10.94	2264.68	2273.91	7722.54	10.36	2265.34	2278.67	7724.81	9.52	2261.36	2281.13	7711.22
?	?	?	12.17	2520.2	2529.06	8593.86	11.52	2520.7	2533.56	8595.59	10.57	2516.67	2535.1	8581.83

Notes: Worst case power usage when server fans operate at max speed.

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StoreOnce 3660

System	Qty 600 LFF	HDD	208V A	W	VA	BTU/hr	220V A	W	VA	BTU/hr	240V A	W	VA	BTU/hr
Base (2U)	0	12	3.25	675.16	676.43	2302.28	3.07	674.08	675.77	2298.6	2.82	673.87	676.28	2297.89
?	?	?	4.48	931	931.92	3174.71	4.23	929.77	931	3170.5 157	3.88	929.53	930.64	3169.71
1 Enclosure (4U)	1	24	5.21	1080.34	1083.6	3683.94	4.93	1079.67	1084.26	3681.67	4.52	1078.51	1085.27	3677.71
?	?	?	6.44	1336.18	1339.09	4556.37	6.09	1335.36	1339.49	4553.5 857	5.58	1334.17	1339.63	4549.53
2 Enclosure ?(6U)	2	36	7.17	1485.52	1490.77	5065.6	6.79	1485.26	1492.75	5064.74	6.22	1483.15	1494.26	5057.53
?	?	?	8.4	1741.36	1746.26	5938.03	7.95	1740.95	1747.98	5936.6 557	7.28	1738.81	1748.62	5929.35

Notes: Worst case power usage when server fans operate at max speed.

Technical Specifications

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Power Requirements (per power supply)	
Range Input Voltage StoreOnce 3620/3640/5200/5250/5650 and base expansion	100 to 120VAC 200 to 240VAC
Rated Input Frequency	
StoreOnce 3620/3640/5200/5250/5650 and base expansion	50 to 60 Hz
Rated Input Current	?
StoreOnce 3620?Base configuration	3.0A (at 100VAC) see table above for 240VAC
Rated Input Current	
StoreOnce 3640?Base configuration ?	3.7A (at 100VAC) see table above for 240VAC
Rated Input Current	
StoreOnce 5200 -?Base configuration	6.2A (at 100VAC)
StoreOnce 5200 - Max Configuration	17.3A (at 100VAC)
?	see table above for 240VAC
Rated Input Current	
StoreOnce 5250?- Base configuration	7.4A (at 100VAC)
StoreOnce 5250?- Max configuration	26.3A (at 100VAC)
?	see table above for 240VAC
Rated Input Current	
StoreOnce 5650 -?Base configuration	8.7A (at 100VAC)
StoreOnce 5650 -?Max configuration?	48.7A see table above for 240VAC

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Acoustic Specifications

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Acoustic Noise StoreOnce 3620/3640 Head unit	
Idle	LWAd 4.4B
(disks spinning)	LpAm 31 dBA
Operating	LWAd 4.5B
(random seeks to disks)	LpAm 33 dBA
Acoustic Noise StoreOnce 5200/ 5250/5650	
Idle	LWAd 4.6B
Head unit	
(disks spinning)	LpAm 35 dBA
Operating	LWAd 4.6B
(random seeks to disks)	LpAm 35 dBA
Acoustic Noise StoreOnce 3660	
Idle	LWAd 5.0 B
(disks spinning)	LpAm 32 dBA
Operating	LWAd 5.0 B
(random seeks to disks)	LpAm 32 dBA
Acoustic Noise StoreOnce 5260	

Technical Specifications

Idle	LWAd 5.2 B
(disks spinning)	LpAm 34 dBA
Operating	LWAd 5.3 B
(random seeks to disks)	LpAm 37 dBA
Acoustic Noise StoreOnce 5660	
Idle	LWAd 5.7 B
(disks spinning)	LpAm 44 dBA
Operating	LWAd 6.4 B
(random seeks to disks)	LpAm 48 Dba

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Physical Dimensions

StoreOnce System		3620	3640	5200	5250	5650
?	Form factor	2U		4U	7U	
Dimensions (H x W x D)	Out of box	8.73 x 44.55 x 73.02 cm ? (3.44 x 17.54 x 28.75 in)		17.46 x 44.8 x 67.94 cm ? (6.88 x 17.64 x 26.75 in)	30.83 x 44.7 x 89.12 cm ? (12.2 x 17.6 x 35.1 in)	
	Shipping	26 x 60 x 96 cm ? (10.4 x 24 x 38.4 in)		53.8 x 60 x 96 cm ? (21.53 x 34 x 38.4 in)	61 x 81 x 109 cm ? (24.1 x 31.9 x 43 in)	
Weight	Out of box	25 kg (55 lbs)	29 kg (64 lbs)	46.2 kg (102 lbs)	107 kg (236 lbs)	
	Shipping	36 kg (79.4 lbs)	40 kg (88.2 lbs)	56.2 kg (123.5 lbs)	130 kg (286.6 lbs)	
Environmental	Operating temperature	10¢X to 35¢XC (50¢X to 95¢XF) at sea level with an altitude derating of 1.0¢XC per every 305 m (1.8¢XF per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20¢XC/hr (36¢XF/hr). ? The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30¢XC (86¢XF).				
	Shipping temperature	-30¢X to 60¢XC (-22¢X to 140¢XF). Maximum rate of change is 20¢XC/hr (36¢XF/hr).				
	Operating humidity	8% to 90% - Relative humidity (Rh), 28¢XC maximum wet bulb temperature, non-condensing				
	Shock and vibration	Levels of shock the product can withstand with no damage being incurred. The values represent a peak input acceleration during an 11ms half-sine shock pulse. • Operating: 2 G's • Non-operating: 15 G's ? Levels of vibration the product can withstand with no damage being incurred. The values represent a flat random vibration input acceleration profile across the given frequency range.				

Technical Specifications

		• Operating: Random vibration at 0.000075 G2/Hz, 10Hz to 300Hz, (0.15 G's nominal). • Non-operating: Random vibration at 0.0005 G2/Hz, 10Hz to 500Hz, (0.5 G's nominal).				
		Notes: Levels of shock and vibration are for base units/server only.				
StoreOnce System Upgrade Kits: ?	?	StoreOnce 3620 24 TB Capacity Upgrade Kit	StoreOnce 3640 48 TB Capacity Upgrade Kit	StoreOnce 5200 48 TB Capacity Upgrade Kit	StoreOnce 5250/5650 44 TB/88 TB Capacity Upgrade Kit	StoreOnce 5250/5650 60 TB/120 TB Drawer Upgrade Kit

?

Physical Dimensions				
StoreOnce System		**3660**	**5260**	**5660**
Dimensions (H x W x D)	**Form Factor**	2U	4U	4U
	Out of box	8.75 x 44.54 x 74.9 cm ? 3.44 x 17.54 x 29.5 in	8.75 x 44.54 x 71.1 cm ? (3.44 x 17.54 x 28 in)	8.75 x 44.54 x 71.1 cm ? (3.44 x 17.54 x 28 in)
	Shipping	54.4 x 24.1 x 90.2 cm ? (23 x 9.5 x 35.5 in)	27.8 x 59.3 x 95.3 cm ? (11.13 x 23.75 x 38.12 in)	54 x 61 x 109 cm ? (21.3 x 24.1 x 43 in)
Weight	**Out of box**	25 kg (55.1 lbs)	21 kg (46.3 lbs)	21 kg (46.3 lbs)
	Shipping	27.9 kg (62 lbs)	35.4 kg (78 lbs)	106.1 kg (234 lbs)
Environmental	**Operating temperature**	10¢X to 35¢XC (50¢X to 95¢XF) at sea level with an altitude derating of 1.0¢XC per every 305 m (1.8¢XF per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20¢XC/hr (36¢XF/hr). ? The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30¢XC (86¢XF).		
	Shipping temperature	-30¢X to 60¢XC (-22¢X to 140¢XF). Maximum rate of change is 20¢XC/hr (36¢XF/hr).		
	Operating humidity	8% to 90% - Relative humidity (Rh), 28¢XC maximum wet bulb temperature, non-condensing		
	Shock and vibration	Levels of shock the product can withstand with no damage being incurred. The values represent a peak input acceleration during an 11ms half-sine shock pulse. • Operating: 2 G's		

Technical Specifications

		- Non-operating: 15 G's ? Levels of vibration the product can withstand with no damage being incurred. The values represent a flat random vibration input acceleration profile across the given frequency range. - Operating: Random vibration at 0.000075 G2/Hz, 10Hz to 300Hz, (0.15 G's nominal). Non-operating: Random vibration at 0.0005 G2/Hz, 10Hz to 500Hz, (0.5 G's nominal). **Notes:** Levels of shock and vibration are for base units/server only.	
StoreOnce System Upgrade Kits: ?	?	StoreOnce 3660 96 TB Capacity Upgrade Kit	StoreOnce 5260/5660 192 TB Capacity Upgrade Kit

Summary of Changes

Date	Version History	Action	Description of Change
19 -Feb-2024	Version 53	Changed	Overview, Service and Support and Configuration Information sections were updated HPE Services Rebranding
21 -Aug-2023	Version 52	Changed	Overview, Standard Features, Configuration Information and Technical Specifications sections were updated.
10 -Jul-2023	Version 51	Changed	Overview, Standard Features and Service and Support sections were updated
01-May-2023	Version 50	Changed	Overview and Standard Features sections were updated
07-Feb-2022	Version 49	Changed	Standard Features section was updated
06-Dec-2021	Version 48	Changed	Service and Support section was updated
01-Nov-2021	Version 47	Changed	Configuration Information section was updated
04-Oct-2021	Version 46	Changed	Service and Support section was updated
07-Sep-2021	Version 45	Changed	Overview, Standard Features, Service and Support, , Configuration Information and Technical Specifications sections were updated.
01-Mar-2020	Version 44	Changed	Changes made throughout the entire document.
06-Jul-2020	Version 43	Changed	Overview, Configuration Information and Standard Features sections were updated.
18-May-2020	Version 42	Changed	Configuration Information and technical Specifications sections were updated.
20-Apr-2020	Version 41	Changed	Configuration Information section was updated.
20-Jan-2020	Version 40	Changed	Standard Features Configuration Information and technical Specifications sections were updated.
16-Dec-2019	Version 39	Changed	Configuration Information Section was updated.
02-Dec-2019	Version 38	Changed	Standard Features and Configuration Information sections were updated.
04-Nov-2019	Version 37	Changed	Changes made throughout the entire document.
07-Oct-2019	Version 36	Changed	VSA information was added and Technical Specifications section was updated.
01-Jul-2019	Version 35	Changed	Technical Specifications section was updated.
06-May-2019	Version 34	Changed	Overview, HPE StoreOnce Backup Models, Common Features and Benefits, HPE StoreOnce Systems, Technical Specifications and Service and Support sections were updated.
04-Mar-2019	Version 33	Changed	Technical Specifications section was updated.
04-Feb-2019	Version 32	Changed	HPE StoreOnce VSA Backup, Software Options and Technical Specifications sections were updated.
03-Dec-2018	Version 31	Changed	Overview, HPE StoreOnce Backup Models, Common Features and Benefits, HPE StoreOnce Systems, Software Options, Technical specifications and Service and Support sections were updated
15-Oct-2018	Version 30	Changed	Overview, HPE StoreOnce Backup Models, Common Features and Benefits, HPE StoreOnce Systems, Software Options, Technical specifications and Service and Support sections were updated
01-Oct-2108	Version 29	Changed	Overview, HPE StoreOnce backup, HPE StoreOnce system, Standard Features, HPE StoreOnce VSA backup, Software Options and Technical Specifications sections were updated

Summary of Changes

07-May-2018	Version 28	Changed	Entitlement Certificate was updated to Capacity Upgrade License Entitlement Certificate. Software options section was revised.
02-Apr-2018	Version 27	Changed	Technical Specifications was revised SKU descriptions were updated.
		Removed	Obsolete SKUs were removed.
05-Mar-2018	Version 26	Changed	The http://www.hpe.com/Storage/DAPRCompatibility URL was updated to: http://www.hpe.com/Storage/StoreOnceSupportMatrix.
05-Feb-2018	Version 25	Changed	Overview section was revised.
08-Jan-2018	Version 24	Changed	Changes made throughout the QuickSpecs.

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Date	Version History	Action	Description of Change
04-Dec-2017	Version 23	Changed	Changes made throughout the entire document.
25-Sep-2017	Version 22	Changed	Changes made throughout the entire document.
07-Aug-2017	Version 21	Changed	Changes made throughout the entire document.
11-Jul-2017	Version 20	Changed	Changes made throughout the QuickSpecs.
05-Jun-2017	Version 19	Changed	Changes made throughout the entire document.
13-Feb-2017	Version 18	Changed	Changes made throughout the entire document.
26-Sep-2016	Version 17	Changed	Changes made throughout the entire document.
16-Sep-2016	Version 16	Changed	Changes made to the VSA Section.
27-May-2016	Version 15	Changed	Changes made to cover new perpetual StoreOnce VSA LTUs and the added 20 TB LTU. Clean up HP ☞ HPE. Cleaned up units e.g. 20 TB ☞ 20 TB (for consistency).
25-Apr-2016	Version 14	Changed	Changes made throughout the entire document.
31-Mar-2016	Version 13	Changed	Changes made throughout the entire document.
17-Dec-2015	Version 12	Changed	Fixed some typos from last version.
01-Dec-2015	Version 11	Changed	Changes made throughout the entire document.
24-Jul-2015	Version 10	Changed	Changes made throughout the entire document.
19-Jun-2015	Version 9	Changed	Changed made to the StoreOnce VSA Backup and the Software Options Sections.
08-May-2015	Version 8	Changed	Corrected some SKU numbers for the StoreOnce VSA and corrected some URLs.
06-Apr-2015	Version 7	Changed	Changed the version to 7 to match Product Bulletin.
30-Mar-2015	Version 6	Changed	Changes made throughout the entire document.
30-Jan-2015	Version 5	Changed	Edits made to 4900 support shelf, 6500 what's in the box contents and 'What's new' June '14 date removal.
09-Jan-2015	Version 4	Changed	Changes to the HPE StoreOnce 6600 purchasing information table.
15-Sep-2014	Version 3	Changed	Update the firmware version number of the 6500 model.
18-Aug-2014	Version 2	Changed	Changes were made throughout the Overview, Technical Specifications, and Software Options Sections. Product Descriptions Updated.
10-Jun-2014	Version 1	New	New QuickSpecs

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