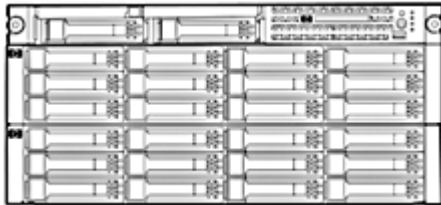


Overview

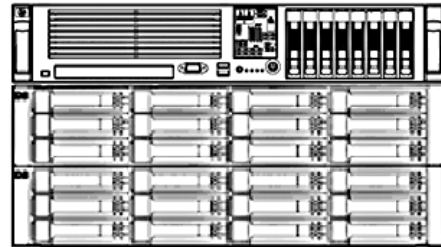
Integrating seamlessly into existing backup applications and processes, the HP StorageWorks 6000 Virtual Library System (VLS 6000) accelerates backup performance in complex SAN environments while improving overall reliability. Emulating popular tape libraries and tape drives, the VLS 6000 matches the existing data protection environment, removing the need to change backup software or monitoring policies. By emulating multiple tape drives simultaneously, more backup jobs can be done in parallel resulting in reduced backup times. Additionally, because the data resides on disk, single file restores are exceptionally fast.

The VLS 6000 simplifies your SAN environment by providing more virtual devices, reducing the complexity of shared storage while maintaining the manageability of a single piece of hardware. As your environment changes, the VLS 6000 adapts to it - host masking and mapping ensure that only the appropriate hosts have access to the VLS 6000. As storage requirements grow, the VLS 6000 matches the environment by scaling both capacity and performance.

HP StorageWorks 6000 Virtual Library System – 4Gb Models



HP StorageWorks 6200 Virtual Library System



HP StorageWorks 6600 Virtual Library System

Models

HP StorageWorks 6000 Virtual Library System 4Gb Models	HP StorageWorks 6218 Virtual Library System	AH809A*
	HP StorageWorks 6227 Virtual Library System	AH810A*
	HP StorageWorks 6636 Virtual Library System	AH811A*
	HP StorageWorks 6653 Virtual Library System	AH812A*

* In EMEA only, #0D1 will appear after this part number on your sales order when factory integration is indicated. In all other regions, due to the nature of this product, orders containing both a VLS system and a 'shock-style' rack that are submitted on the same order section, will be systemically merged and sent to the factory floor for integration. No #0D1 will appear on the VLS for these orders.

Standard Features

VLS6000 Virtual Library System Customer benefits

- Seamless integration into current backup and recovery processes
 - Improved backup and recovery performance over traditional tape solutions
 - Investment protection through scaling both capacity and performance
 - Efficient storage utilization through compression
 - High availability features provide resilience in the face of component failures
-

Key Features

- Emulates popular tape drives and libraries
- Up to 16 libraries and 128 drives emulated simultaneously within a single virtual library system
- Certified with popular backup software packages through HP StorageWorks Enterprise Backup Solution
- Up to 2.2 TB/hr (600 MB/s) throughput with 2:1 compressible data
- Scales capacity and performance
- Data compression (Software compression – 6200, Hardware compression – 6600)
- Hot Swap array drives
- Redundant array power supplies and cooling
- RAID 6 or RAID 5
- Mounts in standard 19" rack
- Automigration on VLS6200/6600
- 6200/6600 are Data De-duplication ready (De-duplication available 2008)

Product Highlights

-
- Seamless integration** The HP 6000 Virtual Library System is deployed, managed and operated just like a tape library minimizing disruptions to your environment. Emulations include the HP ESL E-Series and MSL tape libraries as well as 1/8 autoloaders. The VLS 6000 also emulates the HP Ultrium 230 (LTO1), HP Ultrium 460 (LTO2), HP Ultrium 960 (LTO3), DLT 7000, DLT 8000, and SDLT 320.
-
- Improved backup and recovery performance** Because it can receive many data streams at the same time, the VLS 6000 maximizes the number of backup jobs occurring at a given time reducing the duration of your backup window.
-
- Investment protection through scaling both capacity and performance** As environments and needs change, so does the VLS6000. As capacity is added to the VLS 6000, performance also increases. And, when new SATA hard drives are available, the upgrade is as simple as migrating the data off your VLS 6000, replacing the old HDDs with the new and rebooting - twice the capacity for only the cost of the new hard disk drives.
-
- Platform Migration** As your performance needs increase, migration services enable upgrade to a different HP StorageWorks 6000 Virtual Library System platform without any data loss.
-
- Efficient use of storage capacity** Compression enables up to 2 times the amount of data to be stored in the VLS6000. On the 6200, software compression is used that can be enabled or disabled as needed. On the 6600, a hardware compression card that is always enabled provides up to 2 times the amount of data to be stored without affecting performance.
-
- Advanced Features** The HP StorageWorks 6200 and 6600 Virtual Library System support Automigration. The initial release of these services will be in the form of a "disk cache to tape" which allows copies of data to be moved off the virtual library to physical library under the control of the VLS system, not the back-up application. Future updates will allow full integration with ISVs via SMI-S 1.3 specifications. The VLS 6200 and 6600 will also be able to take advantage of data de-duplication when that feature becomes available in 2008.
-
- Reliability** While the HP 6000 Virtual Library Systems contain reliable hardware featuring hot plug disk drives, standard redundant power supplies and fans as well as the choice of RAID 5 or RAID 6 (VLS 6200 and 6600 only) protection, the real reliability is for your data protection process. Simplifying the process by which storage is shared means fewer errors occur, allowing your process to run more smoothly and faster.
-

Product Highlights

Compatibility

HP's Enterprise Business Solutions (EBS) assures that your HP StorageWorks 6000 Virtual Library System works with leading servers, operating systems, and backup applications - and not just those sold by HP. Based on a foundation of extensive interoperability testing, EBS 1-2-3 provides a step-by-step methodology for designing, configuring, and implementing your SAN ensuring HP VLS6000 Virtual Library System will work seamlessly in many environments. HP VLS6000 Virtual Library Systems are especially suitable in a mixed system environment. For the latest list of servers, workstations, operating systems, and backup software that support HP 6000 Virtual Library System, check the tape backup compatibility pages on our web site at: <http://www.hp.com/go/ebs>.

Server Compatibility

The HP StorageWorks 6000 Virtual Library Systems are supported on many popular industry servers including HP ProLiant and HP-UX servers. For a complete list of HP and third party servers, please visit the Enterprise Backup Solution on the Worldwide web at <http://www.hp.com/go/ebs>.

OS Support

HP provides extensive support on most major operating systems. For the most up-to-date information, please visit the latest compatibility matrix at <http://www.hp.com/go/ebs>

Backup Software Support

The HP StorageWorks 6000 Virtual Library System is supported on leading backup software applications. As new certifications are achieved, they are posted on the Enterprise Backup Solution Compatibility Matrix. Please visit <http://www.hp.com/go/ebs> for the latest compatibility information.

Service and Support, HP Care Pack, and Warranty Information

Warranty

HP Care Pack Services offer upgraded service levels to extend and expand your standard product warranty with easy to buy, easy to use support packages that help you make the most of your hardware and software investments. They let you choose the support levels that meet your business requirements, from basic to mission-critical. They help you contain total cost of ownership.

HP Care Pack warranty extensions can be purchased along with HP products to cost-effectively upgrade or extend your warranty. For many products, post-warranty HP Care Pack Services are available when your original warranty has expired.

Why purchase an HP Care Pack service?

Your standard warranty protects against product defects. HP Care Pack Services help you guard against unplanned downtime, which can reduce your productivity and profitability. These convenient service packages:

- Protect your investment in HP products
- Provide consistent, predictable levels of support across your entire department or business
- Ease budget planning with fixed-cost support that includes parts and labor
- Give you direct access to proven technical and problem-solving expertise
- Offer a choice of response-time and repair-time commitments
- Deliver prompt, measurable results
- Are available whenever and wherever you do business

HP Care Pack availability may vary by country and product.

Supporting your Adaptive Enterprise journey

HP Services helps you make the Adaptive Enterprise real for your organization. The breadth, depth, and quality of HP hardware and software support services can help you **improve the performance** of your IT support processes and resolve the complex software and hardware problems that tax user productivity. HP Care Pack services help you **increase IT environment stability**, efficiency, and agility from the desktop to the data center, and improve the productivity of your employees.

Warranty and Services Included with the Product

Hewlett-Packard provides a 1-year, next-day, on-site, limited warranty for the HP StorageWorks VLS6000 hardware, plus 9x5 phone support for the duration of the warranty. All hard drive modules have a 1-year, parts exchange, limited warranty, with next business day response, plus 9x5 phone support for the duration of the warranty.

For more information about HP's Global Limited Warranty and Technical Support, visit:
<http://h18006.www1.hp.com/products/storageworks/warranty.html>

Service and Support, HP Care Pack, and Warranty Information

Deployment and Per Event HP Installation & Startup for HP StorageWorks Service Descriptions

- Provides for the implementation of the HP StorageWorks VLS6000 products in SAN environments (ESL/ESL E/EML/MSL service also available), including the installation of all VLS6000 hardware.
- Minimizes implementation-related disruptions to your environment and helps ensure increased system reliability and more effective data management

Due to the complexities involved with the initial installation of a HP Virtual Library System into a SAN environment, Hewlett Packard recommends that the SAN Implementation Service (HA114A1) is purchased. This service covers pre-installation preparation activities, installation and configuration of VLS6000 hardware, configuration of hosts (up to 5, additional handled via HA124A1 5B2 per additional 10) and switches, verification testing and customer orientation.

For more information please visit: http://www.hp.com/hps/storage/ns_info.html#related

Recommended Services In order to maximize ROI and product uptime, and minimize the cost of ownership, Hewlett Packard recommends:

3 years 24 x 7 Hardware Support

- Guards against downtime, which reduces productivity and profitability
- Eases budget planning with fixed-cost support that includes parts and labor
- Direct access to proven technical and problem-solving expertise

Installation Services via HP authorized commercial resellers

Description	VLS6200	VLS6600	VLS Capacity Bundle
Tape Library Installation And Start Up	UC927E	UC927E	N/A
Tape Installation HW Installation Only	UD056E	UD056E	UD056E

Installation Services via HP Direct and HP authorized enterprise resellers

Care Pack	Description	Band
For the VLS 6200 and 6600		
HA114A1*	Tape Library Installation And Start Up	5KG
HA113A1	Tape Installation HW Installation Only	5KG
Additional VLS 6200 and 6600 **		
HA124A1	Each additional library on the same site	5B1
Migration of capacity bundle when upgrading system node***		
HA124A1	Additional half day; Additional SAN Host connections up to 10	5B2
For the 6000 Virtual Library System 2.5TB , 4.4TB or 6.6TB Capacity Bundle		
HA113A1	Tape Installation HW Installation Only	564
6000 Virtual Library System Capacity License (Includes installation of customers MSA20)		
HA113A1	Command View VLS Installation Into SAN	564

Service and Support, HP Care Pack, and Warranty Information

*NOTE: Installation and Start up (HA114A1) includes the installation of all subcomponents. i.e. If HA114A1 is ordered for the VLS6000 no HA113A1 are needed for any additional capacity bundle purchased at the same time as the library.

**NOTE: If the additional library is to be configured at a different site the customer must purchase an additional instance of HA114A1 #5KG

***NOTE: New system node must include installation and startup (HA114A1 5KG)

Support Services via HP Direct and HP authorized enterprise resellers

Description	VLS6200 band	VLS6600 band	Capacity Bundle band	Capacity License band	Care Pack
HW, "3-year", "next-day", "13x5", "on-site"	8XM	8XN	8XP	699	HA101A3
HW, "3-year", "4-hour", "13x5", "on-site"	8XM	8XN	8XP	699	HA103A3
HW, "3-year", "4-hour", "24x7", "on-site"	8XM	8XN	8XP	699	HA104A3
HW, "3-year", "6hr CTR", "24x7", "on-site"	8XM	8XN	8XP	699	HA105A3
HW Only, Support Plus, "3-year", "13x5"	8XM	8XN	8XP	699	HA109A3
HW Only Support Plus 24, "3-year", "24x7"	8XM	8XN	8XP	699	HA110A3
HW Only, Proactive 24, "3-year", "24x7"	8XM	8XN	8XP	699	HA111A3
HW Only, Critical Service, "3-year", "24x7"	8XM	8XN	8XP	699	HA112A3

* 6hr CTR 'standalone' service is not offered in Latin or North America.

** Support Plus covers 4hr Hardware response (Software support is not applicable).

*** Both Proactive 24 & Critical Service only relate to 'reactive elements', work is ongoing to offer the 'proactive elements' in the near future (Software support is not applicable).

The HP Care Pack information quoted above relates to 3 year offerings only, 1yr, 4yr and 5yr packs are available for each offering (replace A3 with A1, A4, A5 respectively).

In order to maximize ROI and product uptime, and minimize the cost of ownership, Hewlett Packard recommends the 3-year, 24x7 service options. These offerings will ensure that any product issue can be tackled when they occur (most back up issues will occur outside standard business hours) and that the service coverage regarding period, covers the minimum expected life of the host system.

To find HP Care Pack Services available via HP authorized commercial resellers, visit http://h30125.www3.hp.com/csn/salesmktg/elfpack/elf_nonlkup_ctrylang.asp?code=ELNL

Service and Support, HP Care Pack, and Warranty Information

Services Example

Hardware purchased: 6218 Virtual Library System (AH809A) and one 6000 Virtual Library System 4.4 TB Capacity Bundle (AG170A)

Desire HP installation and Start Up and 3yr 24x7 uplift

Services needed:

HA114A1 5KG (Installation and Startup for VLS6000 and all subcomponents)

HA104A3 8XM (VLS6218 3 yr 24X7 Uplift)

HA104A3 8XP (VLS6000 4.4 TB Capacity Bundle 3 yr 24X7 Uplift)

Hardware purchased: 6636 Virtual Library System (AH811A) and Two 6000 Virtual Library System 4.4TB Capacity Bundle (2X AG170A)

Desire HP installation and Start Up and 3yr 24x7 uplift

Services needed:

HA114A1 5KG (Installation and Startup for VLS6000 and all subcomponents)

HA104A3 8XN (VLS6636 3 yr 24X7 Uplift)

2X HA104A3 8XP (VLS6000 4.4 TB Capacity Bundle 3 yr 24X7 Uplifts)

Kit Contents

Model	Description	Part Number
HP 6218 Virtual Library System	HP StorageWorks 6218 Virtual Library System Supplied with each Virtual Library System <ul style="list-style-type: none">● HP StorageWorks 6200 Virtual Library System node● HP StorageWorks MSA20 Storage Enclosure configured with 12 500 GB SATA disk drives● Serial Cable● Command View Tape Library Software CD● Installation Poster● HP 6000 Virtual Library System Documentation CD● HP Command View Tape Library Software Documentation CD● System recovery CD● 4 IEC power cords (2 for the node, 2 for the MSA20)	AH809A*
HP 6227 Virtual Library System	HP StorageWorks 6227 Virtual Library System Supplied with each Virtual Library System <ul style="list-style-type: none">● HP StorageWorks 6200 Virtual Library System node● HP StorageWorks MSA20 Storage Enclosure configured with 12 750 GB SATA disk drives● Serial Cable● Command View Tape Library Software CD● Installation Poster● HP 6000 Virtual Library System Documentation CD● HP Command View Tape Library Software Documentation CD● System recovery CD● 4 IEC power cords (2 for the node, 2 for the MSA20)	AH810A*
HP 6636 Virtual Library System	HP StorageWorks 6636 Virtual Library System Supplied with each Virtual Library System <ul style="list-style-type: none">● HP StorageWorks 6600 Virtual Library System node● Two HP StorageWorks MSA20 Storage Enclosure each configured with 12 500 GB SATA disk drives● Serial Cable● Command View Tape Library Software CD● Installation Poster● HP 6000 Virtual Library System Documentation CD● HP Command View Tape Library Software Documentation CD● System recovery CD● 6 IEC power cords (2 for the node, 2 for each MSA20)	AH811A*
HP 6653 Virtual Library System	HP StorageWorks 6653 Virtual Library System Supplied with each Virtual Library System <ul style="list-style-type: none">● HP StorageWorks 6600 Virtual Library System node● Two HP StorageWorks MSA20 Storage Enclosure each configured with 12 750 GB SATA disk drives● Serial Cable● Command View Tape Library Software CD	AH812A*

Kit Contents

- Installation Poster
- HP 6000 Virtual Library System Documentation CD
- HP Command View Tape Library Software Documentation CD
- System recovery CD
- 6 IEC power cords (2 for the node, 2 for each MSA20)

HP 6000 Virtual Library System 2.5 TB Capacity Bundle	HP StorageWorks 6000 Virtual Library System 2.5 TB Capacity Bundle Supplied with each Virtual Library System Capacity Bundle <ul style="list-style-type: none">● HP 6000 Virtual Library System Capacity License (T4259A)● HP StorageWorks MSA20 Storage Enclosure configured with 12 250 GB SATA disk drives● 2 IEC power cords● Installation Poster	AF730A*
HP 6000 Virtual Library System 4.4 TB Capacity Bundle	HP StorageWorks 6000 Virtual Library System 4.4 TB Capacity Bundle Supplied with each Virtual Library System Capacity Bundle <ul style="list-style-type: none">● HP 6000 Virtual Library System Capacity License (T4259A)● HP StorageWorks MSA20 Storage Enclosure configured with 12 500 GB SATA disk drives● 2 IEC power cords● Installation Poster	AG170A*
HP 6000 Virtual Library System 6.6 TB Capacity Bundle	HP StorageWorks 6000 Virtual Library System 6.6 TB Capacity Bundle Supplied with each Virtual Library System Capacity Bundle <ul style="list-style-type: none">● HP 6000 Virtual Library System Capacity License (T4259A) - contains quantity 2● HP StorageWorks MSA20 Storage Enclosure configured with 12 750 GB SATA disk drives● 2 IEC power cords● Installation Poster	AH813A*

* In EMEA only, #OD1 will appear after this part number on your sales order when factory integration is indicated. In all other regions, due to the nature of this product, orders containing both a VLS system and a 'shock-style' rack that are submitted on the same order section, will be systemically merged and sent to the factory floor for integration. No #OD1 will appear on the VLS for these orders.

VLS 6000 Capacity License	HP StorageWorks 6000 Virtual Library System Capacity License Supplied with each Virtual Library System Capacity License <ul style="list-style-type: none">● HP 6000 Virtual Library System Capacity License	T4259A
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NOTE: This product enables a customer supplied MSA20 with twelve 250 GB, 500 GB, or 750 GB hard disk drives (HDDs) to be licensed to an existing HP 6000 Virtual Library system. If you require the hardware and the license, purchase the HP 6000 Virtual Library System 2.5TB Capacity Bundle (AF730A), the HP 6000 Virtual Library System 4.4 TB Capacity Bundle (AG170A) or the HP 6000 Virtual Library System 6.6 TB Capacity Bundle (AH813A).

NOTE: Partial configurations cannot be added to the HP 6000 Virtual Library system -

Kit Contents

each MSA20 must have 12 HDDs of the same capacity installed.

Related Options

Power Distribution units	NOTE: For more information on power distribution units, please consult the QuickSpecs on the Worldwide web at http://h18000.www1.hp.com/products/quickspecs/11041_div/11041_div.HTML	
Low Voltage Modular PDU Model, 100 - 127 VAC	24A Model - mPDU, 24A, Low	252663-D71
High Voltage Modular PDU Model(s), 200 - 240 VAC	16A Model - mPDU, 16A, High 24A Model - mPDU, 24A, High 40A Model - mPDU, 40A, High 40A Model - mPDU, 40A, High (power cord attached)	252663-B24 252663-D72 252663-B21 252663-D73
Power Cords (for connection to standard wall outlets)	Power Cord, North American C13, 10A, 1.83m Power Cord, Euro, C13,10A , 1.83m Power Cord, UK, C13,10A , 1.83m Power Cord, Danish, C13, 10A , 1.83m Power Cord, Swiss, C13,10A , 1.83m Power Cord, Italian, C13,10A , 1.83m Power Cord, South Africa, C13,10A , 1.83m Power Cord, Taiwan, C13,10A , 1.83m Power Cord, China, C13,10A 1.83m Power Cord, Japan, C13,10A , 1.83m Power Cord, Australia, C13,10A , 2.5m Power Cord, Argentina, C13,10A , 2.5m Power Cord, Brazil, C13,10A , 1.83m Power Cord, Korea, C13,10A , 1.83m Power Cord, Israel, C13,10A , 1.83m Power Cord, India, C13,10A , 2.0m	AF556A AF568A AF570A AF566A AF565A AF571A AF567A AF561A AF557A AF572A AF569A AF558A AF559A AF560A AF564A AF562A
	NOTE: Each unit comes with 2 IEC power cord for the node and two power cords for each MSA20 included (4 cords with the VLS6100 & 6200, 6 cords with the VLS6500 and 6600 and 10 cords with the VLS6800).	
FC Host Bus Adapters	For more information on FC HBAs please consult the EBS connectivity matrix at http://www.hp.com/go/ebs .	

Related Options

HP OpenView Storage Data Protector Backup Software	LTU (license-to-use), media and manuals	
	Data Protector Starter Pack Single Drive, for Windows	B6961AA
	Data Protector Starter Pack Single Drive, for HP-UX	B6951AA
	Data Protector Starter Pack Single Drive, for Sun Solaris	B6951DA
	LTU only	
	Data Protector Starter Pack Single Drive, for Windows LTU only	B6961BA
	Data Protector Starter Pack Single Drive, for HP-UX LTU only	B6951BA
	Data Protector Starter Pack Single Drive, for Sun Solaris LTU only	B6951CA
	Media	
	Data Protector Media	B6960MA
	Manuals	
	Data Protector Manuals	B6960LA
	Drive Extensions	
	Data Protector drive license for Windows, NetWare, or Linux (Intel)	B6963AA
	Data Protector drive license for UNIX, NAS, or SAN	B6953AA
	Data Protector Library Extension, 61-250 Slots	B6957BA
	Data Protector Library Extension, unlimited Slots	B6958BA
	Functional Extensions	
	Data Protector on-line extension for Windows	B6965BA
	Data Protector on-line extension for UNIX	B6955BA
	Data Protector open file backup license for 1 server	BA153AA
	Data Protector open file backup license for 10 servers	BA153BA
	Data Protector open file backup license for 5 workstations	BA154AA
Data Protector open file backup license for 1 Enterprise Server	BA155AA	
Data Protector open file backup media. no license	BA152AA	
Data Protector Manager-of-Managers extension for Windows	B6966AA	
Data Protector Manager-of- Managers extension for UNIX	B6956AA	
Advanced backup to disk license, 1 TB	B7038AA	
Manuals for Functional extensions	B6960EA	

Configuration Information

Step 1 – Select a Configuration

HP StorageWorks 6653 Virtual Library System	AH812A*
HP StorageWorks 6636 Virtual Library System	AH811A*
HP StorageWorks 6227 Virtual Library System	AH810A*
HP StorageWorks 6218 Virtual Library System	AH809A*

* In EMEA only, #OD1 will appear after this part number on your sales order when factory integration is indicated. In all other regions, due to the nature of this product, orders containing both a VLS system and a 'shock-style' rack that are submitted on the same order section, will be systemically merged and sent to the factory floor for integration. No #OD1 will appear on the VLS for these orders.

Step 2 – Add additional capacity (optional)

HP StorageWorks 6000 Virtual Library System 6.6 TB Capacity Bundle**	AH813A*
HP StorageWorks 6000 Virtual Library System 4.4 TB Capacity Bundle	AG170A*
HP StorageWorks 6000 Virtual Library System 2.5 TB Capacity Bundle	AF730A*

HP 6100 Virtual Library System:

up to one additional capacity bundle may be added to the base unit.

HP 6200 Virtual Library System:

up to three additional capacity bundles may be added to the base unit.

HP 6600 Virtual Library System:

up to six additional capacity bundles may be added to the base unit.

HP 6500 Virtual Library System:

up to two additional capacity bundle may be added to the base unit.

HP 6600 Virtual Library System:

up to six additional capacity bundles may be added to the base unit.

HP 6800 Virtual Library System:

up to twelve additional capacity bundle may be added to the base unit.

* In EMEA only, #OD1 will appear after this part number on your sales order when factory integration is indicated. In all other regions, due to the nature of this product, orders containing both a VLS system and a 'shock-style' racks that are submitted on the same order section, will be systemically merged and sent to the factory floor for integration. No #OD1 will appear on the VLS for these orders.

** The 6.6TB capacity kit is only supported on the VLS6200 and VLS6600 models until VLS 2.1.1 (March 2008) code is available, then it will be supported on all previous VLS models as well.

Configuration Information

Step 3 - Select appropriate Services/Support (optional)

- Determine whether you require services via HP direct/HP authorized enterprise resellers or HP authorized commercial resellers.
- Choose Installation or Installation and Startup service desired. HP recommends Installation and Startup for SAN based libraries. (Details of specific part numbers in service section.)
- Choose support uplift type. There are different service uplifts uplifting years of service, hours of availability and response time. HP recommends three year 24X7 support uplifts for SAN libraries. (Details of specific part numbers in service section.)

Step 4 - Select the Appropriate Rack

Description	Part Number	Supports Factory Racking	Supports Field Racking
S10614 (14U) Rack Cabinet - Shock Pallet ₂	292302-B22	X	X
10622 (22U) Rack Cabinet - Shock Pallet	AF022A	X	X
10622 (22U) Rack Cabinet - Pallet	AF021A		X
10636 G2 (36U) Rack Cabinet - Shock Pallet	AF012A	X	X
10636 G2 (36U) Rack Cabinet - w/Extension - Shock Pallet	AF014A	X	X
10636 G2 (36U) Rack Cabinet - w/o Door - Shock Pallet	AF015A	X	X
10636 G2 (36U) Rack Cabinet - w/ Extension - w/o Door - Shock Pallet	AF016A		X
10636 G2 (36U) Rack Cabinet - Pallet	AF011A		X
10636 G2 (36U) Rack Cabinet - Crate	AF013A	X	X
10642 G2 (42U) Rack Cabinet - Shock Pallet	AF002A	X	X
10642 G2 (42U) Rack Cabinet - w/ Extension - Shock Pallet	AF004A	X	X
10642 G2 (42U) Rack Cabinet - w/o Door, Shock Pallet	AF005A	X	X
10642 G2 (42U) Rack Cabinet - w/ Extension - w/o Door - Shock Pallet	AF006A		X
10642 G2 (42U) Rack Cabinet - Pallet	AF001A		X
10642 G2 (42U) Rack Cabinet - Crated	AF003A		X
Modular Cooling System (MCS) - 42U Cabinet	AF098A	X	X
10647 (47U) - Rack Cabinet - Pallet	245160-B21		X
10647 (47U) - Rack Cabinet - Crate	245160-B23		X

214U racks cannot be used for the VLS6600.

NOTE: (Pallet) used to ship empty racks shipped on a truck

(Shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels)

(Crated) used for air shipments of empty racks.

NOTE: It is mandatory to use a shock pallet in order to ship racks with equipment installed.

NOTE: The full line of VLS6000 products can now be integrated and shipped installed in racks

Technical Specifications

	VLS6218*	VLS6227*	VLS6636	VLS6653
Raw Capacity	6 TB	9 TB	12 TB	18 TB
Max Raw Capacity	24 TB	36 TB	48 TB	72 TB
Usable Capacity (std - non compressed)	4.4 TB	6.6 TB	8.8 TB	13.2 TB
Usable Capacity (2:1 compression)	8.8 TB	13.2 TB	17.6 TB	26.4 TB
Max Usable Capacity (std – non compressed)	17.6 TB	26.4 TB	35.2 TB	52.8 TB
Max Usable Capacity (2;1 compression)	35.2 TB	52.8 TB	70.4 TB	105.6 TB

* These products employ software compression which will drastically impact performance

Performance by configuration 4Gb Models	HP 6200 Virtual Library System		HP 6600 Virtual Library System	
	w/ compression disabled	w/ uncompressible data	w/ 2:1 compressible data	w/ 2:1 compressible data
1 disk enclosure	0.4 TB/hr (100 MB/s)	n/a	n/a	n/a
2 disk enclosures	0.7 TB/hr (200 MB/s)	0.7 TB/hr (200 MB/s)	1.4 TB/hr (400 MB/s)	1.4 TB/hr (400 MB/s)
3 disk enclosures	1.1 TB/hr (300 MB/s)	1.1 TB/hr (300 MB/s)	2.2 TB/hr (600 MB/s)	2.2 TB/hr (600 MB/s)
4 disk enclosures	1.4 TB/hr (400 MB/s)	1.4 TB/hr (400 MB/s)	2.2 TB/hr (600 MB/s)	2.2 TB/hr (600 MB/s)
5 to 8 enclosures	n/a	2.0 TB/hr (560 MB/s)	2.2 TB/hr (600 MB/s)	2.2 TB/hr (600 MB/s)

NOTE: Maximum theoretical performance values. Actual performance is dependent on environment. Software compression on VLS6200 impacts performance by up to 50%

NOTE: 1MB = 1,000,000 bytes

	HP 6200 Virtual Library System	HP 6600 Virtual Library System
Number of Virtual Libraries	1 to 16	1 to 16
Number of Virtual Tape Drives	1 to 128	1 to 128
Interface	6200 is Two 4Gb Fibre Channel Ports (LC connectors, auto-negotiating)	6600 is Four 4Gb Fibre Channel Ports (LC connectors, auto-negotiating)

Power Consumption by Component

VLS6200 Node	852 W
VLS6600 Node	1035 W
MSA20 Enclosure each (with disks)	345 W

RAID Level	VLS6200, 6600	RAID 5 or RAID 6
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Technical Specifications

Dimensions and Physical Characteristics HP 6200 Virtual Library System

Form Factor	3U (total installed form factor – base unit)	
Physical Dimensions (HxWxD):	Node	1.7 x 16.8 x 27.8 in (4.3 x 42.6 x 70.5 cm)
	Disk enclosure	3.5 x 19.2 x 23.5 in (8.8 x 48.8 x 59.7 cm)
NOTE: 1 enclosure standard	Shipping (HxWxD)	41.0 x 48.0 x 40.0 in (104 x 122 x 102 cm)
Out of Box Weight	Node	37 lb (16.78 kg)
	Disk Enclosure	53 lb (24 kg) (per enclosure)
Shipping Weight	143 lb (64.9 kg)	

HP 6600 Virtual Library System

Form Factor	6U (total installed form factor – base unit)	
Physical Dimensions (HxWxD):	Node	1.7 x 16.8 x 27.8 in (4.3 x 42.6 x 70.5 cm)
	Disk Enclosure	3.5 x 19.2 x 23.5 in (8.8 x 48.8 x 59.7 cm)
NOTE: 2 enclosures standard	Shipping (HxWxD)	48.0 x 40.0 x 40.0 in.(121.9 x 101.6 x 101.6 cm)
Out of Box Weight	Node	37 lb (16.78 kg)
	Disk Enclosure	54.3 lb (24.6 kg) (per enclosure)
Shipping Weight	168 lb (76.2 kg)	

HP 6000 Virtual Library System 2.5 TB Capacity Bundle Kit ,HP 6000 Virtual Library System 4.4 TB Capacity and HP 6000 Virtual Library System 6.6 TB Bundle Kit

Form Factor	2U	
Dimensions	Physical Dimensions (HxWxD)	3.5 x 19.2 x 23.5 in (8.8 x 48.8 x 59.7 cm)
	Shipping (HxWxD)	33.5 x 32.5 x 28.0 in (85.1 x 82.6 x 71 cm)
Weight	Out of Box Weight	53 lb (24 kg) (per enclosure)
	Shipping Weight	68 lb (30.8 kg)

VLS 6000 Capacity License

Shipping (HxWxD)	8.5 x 11.0 in (21.6 x 27.9 cm)
Shipping Weight	1 lb (0.5 kg)

Technical Specifications

Environmental	Operating temperature range	10°C to 35°C (50°F to 95°F)
	Shipping temperature range	-40°C to 66°C (-40°F to 150°F)
	Operating Humidity (non-condensing)	20 to 80% Relative Humidity

Worldwide Product Safety and EMC Approvals Safety: Worldwide compliance to 60950-1

[For country specific compliance contact your local sales representative](#) EMC: MSA 20 Regulatory Model Number HSTNM-S001 CISPR 22 CISPR 24 & FCC Class A
VLS 61000 and VLS65000 heads: Regulatory Model Number HSTNM-2105 CISPR 22 CISPR 24 & FCC Class B

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