

### Overview

The HP StorageWorks P4000 Virtual SAN Appliance Software (VSA) is a Virtual Appliance that provides complete SAN functionality for VMware Infrastructure or Microsoft Hyper-V without external SAN hardware. By virtualizing the internal disk capacity of the server running VMware ESX or Microsoft Hyper-V, the VSA eliminates the need for external shared storage required to implement advanced hypervisor features.

Multiple VSA running on multiple hypervisors create a clustered pool of storage with the ability to replicate data across the hosts allowing volumes to stay on-line in the event of a server failure.

Small to medium businesses and remote office customers can lower their IT infrastructure costs and enable higher levels of protection for business critical systems without the purchase of additional hardware.

VSA deployed at remote sites are managed as virtual storage systems using the same Centralized Management Console used to manage your HP P4000 SANs.



### Features and Benefits

#### Benefits

- Gain the benefits of a SAN without requiring a physical SAN infrastructure
- Leverages your server's current disk storage saving money, space, power, cooling and managing another system
- Comes complete with all SAN management features - no additional software to purchase
- Easily build a clustered, highly available SAN without buying expensive hardware and software
- Turns unused storage internal to your hypervisor servers into useful capacity
- Utilize external SAS, iSCSI, or FC arrays supported by VMware ESX or Microsoft Hyper-V as back end storage for the HP P4000 VSA
- Enables super efficient configurations in terms of power, cooling, and space requirements
- Enables a DR solution for remote or branch offices that do not have budget, space, or power for a traditional SAN
- Take advantage of hypervisor advanced features such as VMotion and Live Migration without purchasing external SAN system

#### Product Features

- Easy to deploy and management using simple management console
- Certified SAN/Storage on the VMware Certified Compatibility Guide
- Qualified iSCSI storage on the Microsoft Windows Server Catalog
- Installs easily on any VMware ESX or Microsoft Hyper-V server with few system requirements
- Scale storage by clustering disks in multiple servers into single pool of storage
- Network RAID protects data across systems for redundancy
- Asynchronous replication for data replication to remote sites
- Snapshot capability for data protection
- Thin Provisioning for efficient storage utilization
- Certified with VMware Site Recovery Manager for a simple and affordable DR solution



### Models

HP StorageWorks P4000 Virtual SAN Appliance Software	HP StorageWorks P4000 Virtual SAN Appliance Software Stock LTU <ul style="list-style-type: none"><li>● Includes copy of SAN/iQ Software media and documentation stock-able by the channel</li><li>● Installable on either VMware ESX or Microsoft Hyper-V</li><li>● Up to 10 TB capacity licensed per Virtual SAN Appliance (VSA)</li><li>● Includes 1 yr of software support for each license</li></ul>	TA688AB
	<b>NOTE:</b> Requires 2GHz proc, 1GB RAM, 1 virtual network HP StorageWorks P4000 Virtual SAN Appliance Software LTU <ul style="list-style-type: none"><li>● Includes copy of SAN/iQ Software media and documentation not stock-able by the channel, must order as drop ship and have single end-user quantities represented on the order.</li><li>● Installable on either VMware ESX or Microsoft Hyper-V</li><li>● Up to 10 TB capacity licensed per Virtual SAN Appliance (VSA)</li><li>● Includes 1 yr of software support for each license</li></ul>	TA688AA
	<b>NOTE:</b> Requires 2GHz proc, 1GB RAM, 1 virtual network HP StorageWorks P4000 Virtual SAN Appliance Software E-LTU <ul style="list-style-type: none"><li>● Electronic SAN/iQ Software product entitlement</li><li>● Installable on either VMware ESX or Microsoft Hyper-V</li><li>● Up to 10 TB capacity licensed per Virtual SAN Appliance (VSA)</li><li>● Includes 1 yr of software support for each license</li></ul>	TA688AAE
HP StorageWorks P4000 Virtual SAN Appliance Software - Demo and Evaluation Versions	HP StorageWorks P4000 VSA Laptop Demo Software Version <ul style="list-style-type: none"><li>● Fully functional SAN/iQ Software 60-day evaluation pre-formatted for demonstration on laptops and PC's</li><li>● Up to 4.5 TB capacity per Virtual SAN Appliance (VSA)</li><li>● Support not included</li><li>● Download at <a href="http://www.hp.com/go/tryvsa">www.hp.com/go/tryvsa</a></li></ul>	
	<b>NOTE:</b> Requires VMware Player, Workstation, or Server, 384 MB RAM and 1 virtual network HP StorageWorks P4000 VSA Full Evaluation Version Software for VMware ESX <ul style="list-style-type: none"><li>● Fully functional SAN/iQ Software 60-day evaluation pre-formatted for VMware ESX</li><li>● Up to 10 TB capacity licensed per Virtual SAN Appliance (VSA)</li><li>● Support not included</li><li>● Download at <a href="http://www.hp.com/go/tryvsa">www.hp.com/go/tryvsa</a></li></ul>	
	<b>NOTE:</b> Requires VMware ESX or ESXi, 1GB RAM and 1 virtual network HP StorageWorks P4000 VSA Full Evaluation Version Software for Microsoft Hyper-V <ul style="list-style-type: none"><li>● Fully functional SAN/iQ Software 60-day evaluation pre-formatted for Microsoft Hyper-V</li></ul>	



### Models

- Up to 10 TB capacity licensed per Virtual SAN Appliance (VSA)
- Support not included
- Download at [www.hp.com/go/tryvsa](http://www.hp.com/go/tryvsa)

**NOTE:** Requires Microsoft Windows 2008 or 2008 R2 with Hyper-V, 1 GB RAM and 1 virtual network

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### Hardware Prerequisites

HP StorageWorks P4000 Virtual SAN Appliance Software requires a ESX or Hyper-V server with at least:

- 1 GB of RAM
- 1 virtual CPU with 2GHz
- 5GB to 2TB of disk space per virtual disk file, up to 10TB total per VSA
- A dedicated Gigabit virtual switch



### Ordering Information

#### Step 1 - HP StorageWorks P4000 Virtual SAN Appliance SKUs

	Model Description	
HP StorageWorks P4000 Virtual SAN Appliance Software	HP StorageWorks P4000 Virtual SAN Appliance Software Stock LTU	TA688AB
	HP StorageWorks P4000 Virtual SAN Appliance Software LTU	TA688AA
	HP StorageWorks P4000 Virtual SAN Appliance Software E-LTU	TA688AAE
HP StorageWorks P4000 Virtual SAN Appliance Software - Demo and Evaluation	HP StorageWorks P4000 VSA Laptop Demo Software Version	
	<ul style="list-style-type: none"><li>• Download at <a href="http://www.hp.com/go/tryvsa">www.hp.com/go/tryvsa</a></li></ul>	
	HP StorageWorks P4000 VSA Full Evaluation Version Software for VMware ESX	
	<ul style="list-style-type: none"><li>• Download at <a href="http://www.hp.com/go/tryvsa">www.hp.com/go/tryvsa</a></li></ul>	
	HP StorageWorks P4000 VSA Full Evaluation Version Software for Microsoft Hyper-V	
	<ul style="list-style-type: none"><li>• Download at <a href="http://www.hp.com/go/tryvsa">www.hp.com/go/tryvsa</a></li></ul>	



### *Service and Support, HP Care Pack and Warranty Information*

#### **Services Included with the Product**

HP P4000 VSA includes one year of HP Software Support, standard 9x5 business hours phone support (software technical support and software product and documentation updates) and a 90 day media replacement only warranty.

Including software updates and comprehensive support enhances the performance and availability of your software. Experienced Response Center engineers provide trustworthy advice on issues such as software features and use, problem diagnosis and resolution, and software defect identification.

#### **Software Licensing Terms**

License keys enable all features of the HP P4000 VSA, including storage clustering, managed snapshots, and remote copy. The full 10TB capacity of each P4000 VSA is available with the standard license key. Keys are required for each individual VSA instance.

#### **For increased uptime, productivity and ROI - HP Care Pack packaged services for Storage**

These days, you need to get the most out of your storage investment-you can't afford not to. When you buy HP storage products and solutions, it's also a good time to think about what levels of service and support you may need. To help take the worry out of deploying, designing, maintaining, and managing your environment, we've designed a portfolio of service options that are as: flexible, reliable and scalable as your storage. Unlike storage-only vendors, we take a holistic approach to your entire environment, bridging storage, servers, blades, software and network infrastructures with our HP Care Pack packaged services for Storage.

#### **Protect your business beyond the warranty**

When it comes to robustness and reliability, standard warranties on today's computing equipment have matured just as the technologies have matured. Good news on some fronts-but also a source of potential problems and subsequent consequences that come from depending on standard warranties alone. Standard warranty protects against product defects and some causes of downtime- but not the business. By using a standard approach to warranty uplifts, such as HP Care Pack Services, you can reduce downtime risks and be more certain of operational consistency for both mission-critical and standard business computing. Simply put, HP Care Pack Services normalize the warranty of combined products - helping you proactively guard against unplanned downtime.

#### **Extending warranties with HP Care Pack Services**

For cost-effective upgrading or extending your standard warranty, HP Care Pack Services offer a suite of standard reactive hardware and software support services that are sold separately, or combined as with our Support Plus and Support Plus 24 services. The portfolio also provides a combination of proactive and reactive services, such as Proactive 24 Service and Critical Service. In addition, with HP Proactive Select we offer an innovative approach to service delivery that gives you the flexibility to acquire the specific proactive services you need today, then add services as your needs evolve. HP Proactive Select offers a broad set of technical or per-event type service options - including server, storage, and network, SAN device, and software, environment, installation and education services. Services that you can mix and match depending on your specific requirements, from preliminary planning and equipment delivery to installation, configuration, integration, and testing, through every level of ongoing support. Our HP Care Pack packaged services for Storage assures help when you need it most. And for many products, post-warranty HP Care Pack Services are available when your original warranty has expired.

#### **HP Storage Services: Offering reliability, flexibility and value-just like your storage**

HP Storage Services offers a full spectrum of customer care, from technology support to complex migrations to complete completely managed services. HP Factory Express provides customization, integration and deployment services for turnkey solutions. HP Education offers flexible, comprehensive training on storage networking, disk storage systems, and storage software to help your IT staff get the most out of your investments. And HP Financial solutions extend innovative financing and asset management programs



### Service and Support, HP Care Pack and Warranty Information

to cost-effective buy, manage and eventually retire your older equipment.

HP Storage Services, the trusted business technology experts who manage your technology in action, because when technology works, business works. <http://www.hp.com/hps/storage>

**NOTE:** Care Pack Services availability may vary by product and country.

HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at: <http://www.hp.com/go/lookuptool>

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## Recommended HP Care Pack Services for optimal satisfaction with your HP product

### Recommended Services 3-Year HP Support Plus 24

For a higher return on your storage investment, HP Support Plus 24 provides integrated hardware and software support services designed specifically for your technology. Available 24x7, this 3-year combined reactive support option delivers onsite hardware support and over-the-phone software support around-the-clock. Leverage the full strength of HP Technology Services - customers can trust the services professionals at HP to work collaboratively with them, putting our strategic and technical know-how to work across their entire infrastructure.

- Improve uptime with responsive hardware and software services
- Enjoy consistent service coverage across geographically dispersed sites
- Update HP software at a predictable cost
- Increase customer satisfaction-with no interoperability gaps

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6638EN.pdf>

### HP Installation and Startup Service for StorageWorks P4000 Virtual SAN Appliance Software

For smooth startup and better business outcomes, HP Installation and Startup Service for StorageWorks P4000 Virtual SAN Appliance Software - provides installation and configuration of your product. In today's new era of business technology - customers can trust the services professionals at HP to work collaboratively with them, putting our strategic and technical know-how to work across their entire infrastructure.

- Provides increased virtual storage capacity without increasing needs for additional hardware
- Allows your IT resources to stay focused on their core tasks and priorities
- Reduces installation time, impact and risk to your storage environment
- Helps you effectively utilize HP product by knowledge gained during onsite delivery of the service

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA1-1567ENW.pdf>

### HP Proactive Select Service

HP Proactive Select Service improves your IT performance and manageability through the use of cost effective flexible services. HP provides technical expertise and best practices to accelerate ROI of your technology investment. Selectable proactive services span a wide range of technology and process services - a flexible way to purchase proactive services that fit your particular environment and situation.



### Service and Support, HP Care Pack and Warranty Information

HP Proactive Select Service is technology agnostic and purchased in addition to your choice of underlying reactive support.

- Access to a list of flexible and customizable proactive service activities
- Enhance customers' in-house IT team with complementary assistance from HP
- Improved time to solution
- Reduce business risk and project costs by accessing HP specialists
- Simplify IT operational procedures by leveraging HP best practices

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA2-3842ENN.pdf>

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## Optional HP Care Pack Services that will enhance your HP product experience

### Optional Services      3-Year HP Proactive 24

As an alternative to our recommended support level, for customers who want enhanced operational effectiveness and proactive problem identification:

HP Proactive 24 Service (P24) integrates hardware and software support to help you improve the stability and operational effectiveness of your IT environment. An HP Account Manager acts as your primary point of contact to ensure that HP meets your support needs effectively.

P24 provides the maximum value when multiple technologies in the environment (e.g. servers, storage, SAN and the network), are all covered. It provides an environment-wide view and consistent support of all of these components which affect stability of your key applications.

Choose P24 when you want to:

- Partner with technical experts who help coordinate support, provide hands-on assistance, and share knowledge with your staff
- Rapidly access support and expertise spanning your environment
- Obtain personalized services tailored to your business environment and critical success factors
- Anticipate necessary change - and execute it correctly the first time
- Efficiently manage infrastructure resources to meet your performance objectives

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA0-1614ENUC.pdf>

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### Service and Support, HP Care Pack and Warranty Information

#### eSupport

HP eSupport is a portfolio of technology-based services that assist you with managing your business environment - from the desktop to the data center.

#### Support Portal

The HP support portal provides one-stop access to the information, tools and services you need to manage the daily operations of your IT environment.

Features include:

- Access to self-solve tools (including search technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires an HP service agreement. To access the support portal, visit <http://www.hp.com/support>

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#### Customer Technical Training

Consider education as an integral part of your strategy to get the best return on investment for your HP storage solution. HP offers a variety of training courses on storage software, networking, archiving and disk storage systems. Our classes are available in many delivery modalities from traditional instructor-led courses at one of our 80 training centers worldwide to on-site training customized to your needs or online. [www.hp.com/learn/storage](http://www.hp.com/learn/storage)

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#### HP Services Awards

HP Services continues to be recognized for service and support excellence by customers, partners, industry organizations and publications around the world. Recent honors and award reflect our services team's dedications, technical expertise, professionalism and uncompromising commitment to customer satisfaction. For a list of all our awards, please visit <http://h20219.www2.hp.com/services/cache/433028-0-0-225-121.htm>

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#### Additional Services Information

For more information about HP Care Pack Services for Storage, please visit: <http://www.hp.com/hps/storage>

If you have specific questions, contact your local HP representative. Contact information for a representative in your area can be found at "Contact HP" <http://www.hp.com>

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### *Service and Support, HP Care Pack and Warranty Information*

#### Additional information online

HP P4000 management software [www.hp.com/go/P4000downloads](http://www.hp.com/go/P4000downloads)

HP P4000 compatibility information [www.hp.com/go/P4000compatibility](http://www.hp.com/go/P4000compatibility)

Virtual SAN Appliance (VSA) trial software [www.hp.com/go/tryvsa](http://www.hp.com/go/tryvsa)

- HP home page [www.hp.com](http://www.hp.com)

- HP StorageWorks products home page <http://h18006.www1.hp.com/storage/index.html>

- HP Services home page [http://h20219.www2.hp.com/services/cache/13424-0-0-225-121.html?jumpid=reg\\_R1002\\_USEN](http://h20219.www2.hp.com/services/cache/13424-0-0-225-121.html?jumpid=reg_R1002_USEN)

- HP Products & Services home page <http://h20219.www2.hp.com/services/cache/13403-0-0-225-121.html>

HP Solutions

For more information about HP Care Pack Services for Storage, please visit:

<http://www.hp.com/hps/storage>

If you have specific questions, contact your local HP representative. Contact information for a representative in your area can be found at "Contact HP" <http://www.hp.com>

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The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

For hard drives, 1 GB = 1 billion bytes. Actual formatted capacity is less.

