

Overview

HP PolyServe Software for Microsoft SQL Server enables multiple Microsoft SQL Server instances to be consolidated onto substantially fewer servers and centralized SAN storage. PolyServe's unique "shared data" architecture delivers enterprise class availability and virtualization-like flexibility in a utility platform. Customers have experienced server count and storage footprint reduction of over 75%, leading to hard cost savings and a reduction of datacenter facility power consumption. Additionally, improvements in operational efficiency contribute to three year total cost of ownership (TCO) reduction of 50%.

Unlike server virtualization and traditionally high availability products, it goes beyond just consolidation and simple failovers to provide scalable capacity allocation, on-the-fly instance mobility, and meets Microsoft's SQL Server Always On requirements, making it the ideal solution for database consolidation.

Models

NOTE: The CPU indicates number of sockets. HP PolyServe Installation and Startup service is required with the purchase of a first cluster.

NOTE: E-LTU means electronic License-to-Use (E-LTU).

Electronic Kits (available via limited points of sale; if not available, order physical kits instead)

HP PolyServe DB Util 8 CPU E-LTU 24x7 SW, includes one year of 24x7 software support T9085AAE

NOTE: This software package is for the HP PolyServe Software for Microsoft SQL Server software.

HP PolyServe Database Utility Pack 8 CPU E-LTU T5395ABE

NOTE: This software package is for the HP PolyServe Software for Microsoft SQL Server software. 24x7 software support not included, must be purchased separately.

HP PolyServe DB Util 1 CPU E-LTU 24x7 SW, includes one year of 24x7 software support T9086AAE

NOTE: This software package is for the HP PolyServe Software for Microsoft SQL Server software.

HP PolyServe Database Utility Pack 1 CPU E-LTU T5395AAE

NOTE: This software package is for the HP PolyServe Software for Microsoft SQL Server software. 24x7 software support not included, must be purchased separately.

HP PolyServe DB/FSU 8 CPU E-LTU 24x7 SW, includes one year of 24x7 software support T9087AAE

NOTE: This software package is for the HP PolyServe Software for Microsoft SQL Server software.

HP PolyServe Database/File Serving Utility Pack 8 CPU E-LTU T5396ABE

NOTE: This software package is for the HP PolyServe Software for Microsoft SQL Server software. 24x7 software support not included, must be purchased separately.

HP PolyServe DB/FSU 1 CPU E-LTU 24x7 SW, includes one year of 24x7 software support T9088AAE

NOTE: This software package is for the HP PolyServe Software for Microsoft SQL Server software.

HP PolyServe Database/File Serving Utility Pack 1 CPU E-LTU T5396AAE

NOTE: This software package is for the HP PolyServe Software for Microsoft SQL Server software. 24x7 software support not included, must be purchased separately.

HP PolyServe DB/FSU Test 1 CPU E-LTU 24x7 SW, includes one year of 24x7 software support T9089AAE

NOTE: This software package (for use only in non-production environments) is for the HP PolyServe Software for Microsoft SQL Server software as well as the HP PolyServe file serving utility (FSU) software.

HP PolyServe DB/FSU Test 1 CPU E-LTU T5397AAE

NOTE: This software package (for use only in non-production environments) is for the HP PolyServe Software for Microsoft SQL Server software as well as the HP PolyServe file serving utility (FSU) software. 24x7 software support not included, must be purchased separately.

Physical Kits

HP PolyServe DB Util Pack 8 CPU Flex LTU SW, includes one year of 24x7 software support 457861-B21

HP PolyServe DB Util Pack 1 CPU Flex LTU SW, includes one year of 24x7 software support 457860-B21

HP PolyServe Database Utility Pack 1 CPU LTU T5395AA



Overview

HP PolyServe DB/FSU 8 CPU Flex LTU SW, includes one year of 24x7 software support NOTE: This software package is for the HP PolyServe Software for Microsoft SQL Server software as well as the HP PolyServe file serving utility (FSU) software.	457863-B21
HP PolyServe DB/FSU 1 CPU Flex LTU SW, includes one year of 24x7 software support NOTE: This software package is for the HP PolyServe Software for Microsoft SQL Server software as well as the HP PolyServe file serving utility (FSU) software.	457862-B21
HP PolyServe Database/File Serving Utility Pack 1 CPU LTU NOTE: This software package is for the HP PolyServe Software for Microsoft SQL Server software as well as the HP PolyServe file serving utility (FSU) software. 24x7 software support not included, must be purchased separately.	T5396AA
HP PolyServe DB/FSU Test 1 CPU Flex LTU SW, includes one year of 24x7 software support NOTE: This software package (for use only in non-production environments) is for the HP PolyServe Software for Microsoft SQL Server software as well as the HP PolyServe file serving utility (FSU) software.	457864-B21
HP PolyServe Software Media CD NOTE: Hard-copy product CDs.	T5392AA
HP PolyServe I&S Service NOTE: Provides onsite installation and startup services for HP PolyServe Software for Microsoft SQL Server software products.	HA114A1-57Q

Product Ordering Information

Ordering the HP PolyServe Software for Microsoft SQL Server software is easy.

- First determine how many sockets in total will host Microsoft SQL Server database instances. For example, if six (6) HP ProLiant DL585, HP ProLiant DL580 or HP ProLiant BL685 Server Blade, HP ProLiant BL680c Server Blade with four (4) sockets each will be used, order 24 CPU of HP PolyServe Software for Microsoft SQL Server software, or 3 units of T9085AAE (3x8 CPU = 24).
- A pair of servers are recommended per PolyServe cluster for configuring cluster-wide services. Usually a pair of two (2) socket servers such as HP ProLiant DL385, HP ProLiant DL380 or HP ProLiant BL465 Server Blade, HP ProLiant BL460c Server Blade are used for this purpose. Order 4 CPU of HP PolyServe DB/FSU software, or 4 units of T9088AAE (4x1 CPU = 4)
- Order a cluster install service (HA114A1-57Q) per location where a cluster will be installed.

At A Glance

- **Microsoft SQL Server Consolidation:** Customers have experienced Microsoft SQL Server count and storage footprint reduction of over 75%, leading to hard cost savings and a reduction of datacenter facility power consumption. Additionally, improvements in operational efficiency contribute to three year total cost of ownership (TCO) reduction of 50%.
- **High Availability for Mission-Critical Applications:** Provides zero-downtime architecture for Microsoft SQL Server databases that drastically reduces both planned and unplanned downtime.
- **Real-time Resource Allocation Adjustments:** Dynamic Re-Hosting provides Instance Mobility, the ability to move Microsoft SQL Server instances from one server to another with less than 30 seconds of downtime, to optimize resources based on shifting workloads.
- **Scale System Capacity Online:** Add server, blade, and storage capacity without disrupting existing operations.
- **Simplify Infrastructure Management:** Reduce the time required to perform routine system and storage administration tasks by up to 75%. "One-Click" and "Roll-Through" maintenance pushes updates or hot fixes to all servers.
- **"Shared Data" Designed for Database Consolidation and Management:** The "Shared Data" architecture provides the ultimate flexibility in data structure configuration allowing Database Administrators (DBAs) to tune for performance, security, and manageability while still deriving the benefits of consolidation and high availability.
- **Shared Services Model:** The leading Enterprise-wide consolidation platform for Microsoft SQL Server that enables a standardized Shared Services model for better SLA achievement and easier cost allocations, all at a lower cost structure.
- **Qualified and Supported Solution by Microsoft:** Qualified and supported solution in Microsoft SQL Server Always On program, having met a set of SQL Server I/O requirements focused on reliability and high performance.

Product Features

- Flexibility**
- Dynamic Re-Hosting™ to quickly deploy, stack or reallocate Microsoft SQL Server instances to any server without the pain of forklift upgrades
 - Add server, blade, and storage capacity easily and without disrupting existing operations
 - Only server consolidation solution that provides enterprise class availability and virtualization-like flexibility

- Manageability**
- "Shared Data" architecture maximizes consolidation while providing ultimate flexibility in data structure configuration for DBAs
 - Single, shared pool of resources simplifies storage allocation, backup, and configuration tasks
 - Enables a shared services model for more efficient staff utilization and budget allocation

- High Availability**
- Reliable, easy to manage high availability for all instances
 - "One-Click" and "Roll-Through" maintenance pushes updates or hot fixes to all servers
 - Qualified and supported solution in Microsoft SQL Server Always On program

Microsoft SQL Server Support	Microsoft SQL Server Versions	Microsoft SQL Server 2005, Microsoft SQL Server 2000
	Integrated High Availability Database health monitoring and automated failover with active-active and many-many	
	Dynamic Re-Hosting™	Moves Microsoft SQL Server instances to a new server within 30 seconds.
	"One-Click" Maintenance	Push hot-fixes and service packs to every server with a single mouse click.
	Backups / Snapshots	Support for Microsoft SQL Server's Database Backup snapshots, storage array based backup and 3rd party backup solutions.
	Fast Recovery	Quickly reboot with database fast recovery via Database Consistency Checker
	Multi-Instance Installer	Installs multiple Microsoft SQL Server instances across multiple servers simultaneously, upgrade multiple existing Microsoft SQL Server instances on multiple servers simultaneously, and when a new server is added to the cluster, installs multiple Microsoft SQL Server instances on the new server in one action, making the whole cluster utility as easy to manage as one server.
Multiple "default" instance support	Ability to consolidate multiple independent "default" instances of Microsoft SQL Server on the same server without requiring client change to connection strings.	

Product Features

HP PolyServe Software for Microsoft SQL Server software Specifications	Operating Systems	64-bit: Windows Server 2003 R2 32-bit: Windows Server 2003 or later
	Included Software	NTFS-compatible Symmetric Cluster File System, Distributed Lock Manager, Cluster Volume Manager (CVM), built-in High Availability Services, Management Console.
	Storage Protocols	Network-attached fiber channel (FC) and iSCSI (based on Microsoft Initiator).
	Clustering Options	Supports both Flexible Server Fencing and Flexible Fabric Fencing.
	Storage	Supports many 100TBs of industry-standard network storage attached via FC or iSCSI.
	Servers	Supports up to 16 industry-standard AMD Opteron and Intel EM64T servers per cluster
	File system size and block size support	16 TB file system and 4KB and 8KB block size support; up to 128 filesystems per cluster
	Single System Semantics	Applications do not need to be cluster aware. The Microsoft SQL Server Utility is fully compliant with all Win32 API calls and exhibits the same behavior as NTFS
	Symmetric Cluster File System	Fully journaled, symmetric, NTFS-compatible, cluster file system. Supports standard NTFS interfaces for security, high-performance IO, and file sharing.
	General-Purpose Applications	Run Windows-compatible applications such as backup and restore, anti-virus, and line-of-business applications directly on a PolyServe Utility server to offload Microsoft SQL Server servers.
	SAP and Microsoft BizTalk support	Supports a mission-critical Microsoft SQL Server database tier associated with SAP and/or Microsoft BizTalk environments.
	Hardware-based snapshots via Windows VSS	Supports Volume Shadow Copy Service (VSS) to allow VSS Requestors to initiate snapshots. Supports Volume Shadow Copy Service (VSS) which allows any system or software that supports VSS snapshots to perform snapshots in concert with the HP PolyServe software, and is initiated directly from the HP PolyServe management GUI or CLI.
	Enterprise Management Integration	Integrated with Microsoft System Center Operations Manager (SCOM) 2007 for multi-cluster discovery, management, and visualization of HP PolyServe objects - delivered by a downloadable SCOM pack. Also supports alerts and notifications via SNMP, e-mail and scripts.
	Role Based Enterprise Security and Single Sign-on	Enables separation of responsibilities between and among Server Administrators, Storage Administrators, DBAs, and other IT staff and is fully definable and customizable per customer. Tight integration with Active Directory (AD) also enables role management solely through AD and single sign-on.
	Enterprise Auditing	Provides auditing of all state changing actions and logon activity
	Disaster Recovery	Disaster Recovery support with volume mobility, reconstruction, and recovery capabilities for simplifying recovery at both primary and secondary sites
Cluster Auto-Provisioning Software (CAPS)	Wizard driven installation experience	

Product Features

Additional Features and Benefits	Cluster Volume Manager	Makes a single pool of storage safely available to all servers in the cluster and provides configurable striping to tune performance and optimize for specific workloads. Cluster Volume Manger can also be used to aggregate storage across multiple arrays to provide flexibility for creating very cost effective price/performance solutions.
	Management Console	Manage a cluster from a single management point, manage failover targets, perform Dynamic Re-Hosting™ and monitor cluster wide performance and storage utilization.

HP Web Sites

- HP PolyServe Software for Microsoft SQL Server Solutions: <http://www.hp.com/go/polyserve>
- HP StorageWorks Disk Storage Solutions: <http://www.hp.com/go/disk-storage>
- HP ProLiant Servers: <http://www.hp.com/go/proliant>

Service and Support, HP Care Pack, and Warranty Information

HP Care Pack Services

4-Hour 24x7 Same Day Hardware Support

Responsive service coverage available whenever you need it

Increase equipment availability and productivity with round-the-clock onsite and remote support for your HP hardware, as well as selected multi-vendor equipment. This flexible HP Care Pack Service covers desktops, workstations, servers, storage systems, and network equipment.

Choose 4-Hour 24x7 Same Day Hardware Support when you need to:

- Extend your hardware warranty coverage with prompt, anytime service for key systems and devices
- Obtain easy-to-buy, easy-to-use onsite services
- Improve hardware performance and uptime
- Increase the return on your HP and multi-vendor hardware investments
- Enjoy consistent service coverage across geographically dispersed sites

Service highlights

- **Remote problem diagnosis and support** - HP Services uses electronic remote support tools to isolate your problem and facilitate resolution.
- **4-hour onsite response 24x7x365** - For issues that cannot be resolved remotely, an authorized HP Services representative arrives at your site within 4 hours after your call has been logged. Service is available around-the-clock every day, including all holidays. HP Services returns your covered hardware to operational condition, repairing or replacing components or entire units as necessary. Your coverage includes all required parts and materials.
- **Escalation management** - Established escalation procedures enlist specialized expertise from HP and selected third-parties.

Software Product Updates **Enhance user productivity with the latest software versions.**

HP Software Product Updates support brings you new versions of HP and selected HP-supported third-party software products, patches, and technical manuals. This convenient HP Care Pack service also includes licensing to use and copy the new versions.

Updates for third-party and selected HP software products are automatically forwarded to you. You'll be notified when new versions of other HP software products become available, allowing you to choose whether you wish to receive updates. Subscription-based purchasing gives you substantial savings vs. the cost of individual software updates.

Choose Software Product Updates when you need to:

- Update HP and selected third-party software at a predictable cost
- Take advantage of subscription savings on software updates
- Have your system managers automatically notified of new software releases
- Keep your license compliancy up-to-date

Service highlights

- **Updates** - Complete HP and selected third-party software product and documentation updates are made available to your system manager. For certain products, you may have a choice of delivery media type. Software technical manuals may be available on media instead of paper.
- **Licensing** - You receive a license to use and copy software product updates for all systems covered by your original software license.
- **Electronic software information** - Access HP's electronic support facility for software patches, a symptom-solution database, product descriptions, specifications, technical literature, and more.

Service and Support, HP Care Pack, and Warranty Information

24x7 Software Technical Support

All day, every day problem resolution - plus cost-saving software updates
HP 24x7 Software Technical Support provides comprehensive round-the-clock services and cost-saving updates to help you enhance the performance and availability of software from HP and other leading vendors.

This convenient HP Care Pack service gives your IT team direct access to HP IT Response Centers. Experienced Response Center engineers provide trustworthy advice on issues such as software features and use, problem diagnosis and resolution, and software defect identification. Any member of your IT staff can electronically access essential product and support information.

In addition, 24x7 Software Technical Support brings you software updates at substantial subscription savings. This includes new versions of HP and selected third-party software products, patches, and documentation, as well as licensing to use and copy these versions.

Choose 24x7 Software Technical Support when you need to:

- Improve the productivity of system managers and operators
- Improve system performance and reduce downtime due to software defects
- Expedite problem resolution through expert-level technical resources available whenever you need them
- Enjoy consistent service coverage across geographically dispersed sites
- Update HP and selected third-party software at a predictable cost
- Take advantage of subscription savings on software updates
- Keep your license compliancy up-to-date

Service highlights

- **24x7x365 access to technical resources** - Connect with HP Response Center engineers via telephone, electronic communication, or FAX for assistance in resolving software implementation or operations problems. Service is available around the clock every day, including all holidays.
- **Problem analysis and resolution** - HP Services provides corrective support to resolve identifiable and reproducible software product problems, and to help you identify problems that are difficult to reproduce. You can also receive assistance in trouble-shooting problems and setting configuration parameters.
- **Software features and operational support** - HP provides information on the latest product features and known problems and solutions, plus operational advice and assistance.
- **Escalation management** - Established escalation procedures enlist specialized expertise from HP and selected third-parties.
- **Installation advisory** - Advisory support is available for help with installation and updating of standalone applications or products installed in a network environment.
- **Software updates and licensing** - Complete HP and selected third-party software product and documentation updates are available to your system manager. You receive a license to use and copy software product updates for all systems covered by the original software license.
- **Electronic software information** - Access HP's electronic support facility for software patches, a symptom-solution database, product descriptions, specifications, technical literature, and more.

Available HP Care Pack Services

Extend your product warranty with a wide choice of cost-saving support packages.

HP Care Pack Services are sold by HP and HP authorized enterprise and commercial resellers. Services for customers purchasing via direct and enterprise resellers are quoted using HP order configuration

Service and Support, HP Care Pack, and Warranty Information

tools. Additional information about HP Care Pack Service features and benefits is available at <http://www.hp.com/hps/carepack/services/>.

Key for HP Care Pack Service availability in the table below:

E = Service available for customers purchasing direct and via enterprise resellers

C = Service available for customers purchasing via commercial resellers

N/A = Service not applicable

HP Care Pack Services Deployment and Per Event Services	Service Available
HP Installation	N/A
HP Installation & Startup	E
HP Implementation	E

For more information about Deployment and Per Event Services for HP Storage, visit <http://www.hp.com/hps/storage/>.

HP Care Pack Services Availability Services	1 yr	3 yr	4 yr	5 yr
HP Next Day Hardware Support	N/A	N/A	N/A	N/A
HP 4 Hr, 9x5 HW Support	N/A	N/A	N/A	N/A
HP 4 Hr, 13x5 Hardware Support	N/A	N/A	N/A	N/A
HP 4 Hr, 24x7 Hardware Support	N/A	N/A	N/A	N/A
HP 6 HR Call-to-Repair HW Support	N/A	N/A	N/A	N/A
HP Software Support	E/C	E/C	E/C	E/C
HP Software Support 24x7	E/C	E/C	E/C	E/C
HP Support Plus	E/C	E/C	E/C	E/C
HP Support Plus 24	E/C	E/C	E/C	E/C
HP Proactive Essentials 9x5, 10 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 9x5, 25 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 9x5 Unlimited	N/A	N/A	N/A	N/A
HP Proactive Essentials 24x7, 25 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 24x7, 50 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 24x7 Unlimited	N/A	N/A	N/A	N/A
HP Proactive 24 Service	E	E	E	E
HP Critical Service	E	E	E	E

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

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>

Instant Support Enterprise Edition (ISEE)

HP Instant Support Enterprise Edition (ISEE) provides a single remote monitoring and support solution for your IT data center. ISEE uses continuous hardware event monitoring and automated notification to identify and prevent potential critical problems.

ISEE is a feature of HP Hardware Support Onsite Service with Next-Day response or better, Proactive Essentials, Proactive 24, Critical Service and warranty support for the selected products.

For more information or to download ISEE, visit <http://www.hp.com/go/instant-support>

Additional Storage Services Information

For more information about Deployment, Per Event, Consulting and Education services for HP Storage, visit: <http://www.hp.com/hps/storage/>

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

http://www.hp.com/hps/carepack/storage/cp_networked.html

For more information about HP Storage Software, services and updates, visit:

<http://h18006.www1.hp.com/storage/software.html>

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>

Environment-friendly Products and Approach

End-of-life Management and Recycling

Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to <http://www.hp.com/go/green>. To recycle your product, please go to: <http://www.hp.com/go/green> or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

Service and Support, HP Care Pack, and Warranty Information

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