

Overview

HP EVA P6000 Storage software and disaster-tolerant solutions help enable high availability for your enterprise application environments. These solutions, especially when integrated with applications like HP Data Protector, simplify storage management activities, improve capacity utilization, automate backups and data protection, and utilize your IT staff and resources better.

The software offerings can be grouped under the following categories;

- Storage Device Management Software
 - HP P6000 Command View Software
 - HP P6000 Performance Advisor Software
 - HP P6000 Thin Provisioning Software
 - HP P6000 SmartStart Software
 - HP Dynamic Capacity Management Software
 - Storage Replication/HA Software
 - HP P6000 Business Copy Software
 - HP P6000 Continuous Access Software
 - HP Cluster Extension Software
 - HP Metrocluster/Continental Cluster
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What's New

- New Command View v10.3 with support for UNMAP for VMware VAAI and Windows Server 2012 which helps reclaim block space on Thin Provisioned LUNs

Storage Device Management

HP P6000 Command View Software

Overview

HP P6000 Command View Software manages EVA P6000 Storage easily, and provision storage quickly to address the changing business requirements. The P6000 Command View provides a comprehensive software suite that includes everything you need to manage an EVA from provisioning data quickly, to adjusting LUNs, to migrating Vdisks between storage tiers. All prior generations of EVAs can be managed from a single image of P6000 Command View v10.2 or later software, with the exception of the EVA3000 and EVA5000 arrays. The EVA3000/5000 arrays are not supported with CV10 and above e. The P6000 Command View software suite provides both server-based management and array-based management for simplicity and cost savings. P6000 Command View simplifies all the administration tasks by providing a centralized view of EVA P6000 Storage via a single management console. It provides support for Fibre channel or iSCSI connectivity that provides choice based on your business needs which maximizes your existing infrastructure investment.

P6000 Command View Software improves the efficiency of IT administration, for faster EVA configuration by creating, documenting and automating the EVA commands into powerful scripts. It helps to quickly pinpoint performance bottlenecks so that applications run at optimized performance.

P6000 Command View Software provides improved security that would allow administrators to take advantage of user defined domain groups and local groups. Command View supports two levels of access - Administrator (read/write), User (read only). In addition Command View also provides audit logging capability of user actions and events that change the system state. Administrators can now use the audit logging capability to see who did what and when. P6000 Command View Software also provides secure storage (LUNs) against unauthorized access so business data assets are safe.

What's New

- New Command View v10.3 with support for UNMAP for VMware VAAI and Windows Server 2012 which helps reclaim block space on Thin Provisioned LUNs. Requires EVA Controller Code XCS 11200000 or later

Models

Product Name	Product Number
HP P6000 Command View v10.3 Software Suite	T5494K
HP P6000 Command View v10.3 E-Software Suite	T5494KAE
HP P6500 Command View SW LTU	TA811A
HP P6500 Command View SW E-LTU	TA811AAE
HP P6300 Upgrade to P6500 Command View LTU	TC339A
HP P6300 Upgrade to P6500 Command View E-LTU	TC339AAE

NOTE:

P6300 LTUs work on both the new EVA P6350 Storage arrays and P6300 arrays.

P6500 LTUs work on both the new EVA P6550 Storage arrays and P6500 arrays.

P6300 Command View LTU is included with the pre-configured EVA P6300 and P6350 Combo Kits or Starter Kits and cannot be ordered separately.

For P63x0 to P65x0 upgrade LTUs, CV Upgrade Keys to the P65x0 would be provided that would validate for the previous Unlimited LTU for P63x0. Additionally this LTU also includes the Thin Provisioning and Dynamic Capacity Manager licenses for the P65x0.

Product

Highlights/Benefits

- Single pane of glass management for multiple SBM and ABM instances.
- Simplified array administration compared to traditional array management
 - One Command View instance can manage up to 16 EVA P6000 Storage arrays

NOTE: HP recommends a maximum of eight EVA per HP P6000 Command View 9.2 or later instance. When running Command View 9.1 or earlier, the recommended maximum is four. This recommendation applies to all server types

 - Automate and aggregate management tasks



Storage Device Management

- New Intuitive, easy-to-use GUI
- Thin Provisioning for optimized capacity utilization.
- Migrate Vdisks between disk groups and change RAID levels with just a few mouse clicks.
- New support for UNMAP for VMware VAAI and Windows Server 2012 which helps reclaim block space on Thin Provisioned LUNs with Command View v10.3. Requires EVA Controller Code XCS 11200000 or later
- HP EVA to 3PAR Online Import feature in Command View v10.2 or later that manages the migration of data from a source EVA storage system to a destination HP 3PAR storage system. No additional Command View license is required to use this feature. A 3PAR Peer Motion license is required for the 3PAR storage system.
- Graphical Performance Advisor Software
- Dual deployment options Array-Based Management or Server-Based Management on both EVA P6350 and P6550 Array-Based Management eliminates the need for a separate management server in most configurations. The new models have a new faster 667 MHz ABM (Array Based Management module) for up to 20% improved Command View performance for management functions.
- Fibre Channel and iSCSI support
- Improved security model utilizing the underlying operating system security. Integrates with Windows Active Directory. Supports two levels of access Administrator (read/write), User (read only). Audit logging capability allows administrators to see who did what and when.
- Quickly provision online storage and instantly replicate data
- Supports both enhanced asynchronous replication and synchronous replication.
- Simplified tiered storage, putting information to work in the lowest cost physical capacity environment
- Proactive remote monitoring services with HP ISEE for maximum uptime
- Standards-based SMI-S and SNIA CTP certification
- Secure LUNs against unauthorized access (LUN Masking)
- Flexible management choice on Windows hosts
- Centralized management of Microsoft Windows environment and HP EVA P6000 through a common Microsoft Operations Manager (MOM) console

HP EVA to 3PAR Online Import

- HP EVA to 3PAR Online Import is a new feature in Command View that manages the migration of data from a source EVA storage system to a destination HP 3PAR storage system. Using this feature, EVA virtual disks and host configuration information can be migrated to a 3PAR destination storage system without changing host configurations or interrupting data access.

This function works in conjunction with 3PAR Peer Motion Software. A Peer Motion license is required for the 3PAR storage system.

For more information on HP 3PAR Peer Motion see "HP 3PAR Peer Motion Software - Overview & Features,"

<http://h18006.www1.hp.com/storage/software/3par/peermotion>

HP P6000 Performance Advisor Software

- HP P6000 Performance Advisor Software provides an intuitive, easy to use, performance monitoring and troubleshooting interface for the HP P6000 EVA. Performance Advisor software is well integrated with the HP P6000 Command View Software for single pane of glass management and performance monitoring. Single tool provides performance data for EVA P6000 and the prior generation EVA 4x00, 6x00, 8x00.

HP P6000 SmartStart Software included with

- HP P6000 SmartStart Software is a configuration utility that simplifies the installation for the HP EVA P6000 family. It also installs both the HP

Storage Device Management

the P6000 Command View Software Suite

P6000 Command View Software and HP P6000 Command View EVAperF Software. The P6000 SmartStart Software then assists you in the first provisioning of your new storage. Easy to follow instructions with on-screen help to set-up your storage in a few mouse clicks, also helping with the installation of Multi-pathing I/O (MPIO) drivers and the Storage System Scripting Utility (SSSU) in a Windows and Linux environments. The EVA family is known for its array management ease of use. HP P6000 SmartStart Software continues in that tradition, adding simplified set-up for new users of the EVA P6000 family of storage arrays.

HP Replication Solutions Manager Software included with the P6000 Command View Software Suite

- The Replication Solutions Manager Software integrates with HP P6000 Business Copy Software and HP P6000 Continuous Access Software for local and remote replication. This results in a unique, cost effective disaster recovery solution, with less effort to configure offering value to IT and its resources. Automated scripts, wizards, and Interactive Replication Topology Viewer reduce complexity and provide greater flexibility of executing tasks. RSM is included in each Command View media kit.

HP Storage Scripting System Utility (SSSU) included with HP P6000 Command View Software Suite

- Comprehensive command line support
 - Host-to-array communication bridge
 - Powerful tool to document and automate tasks

HP Command View EVAperF; included with the P6000 Command View Software Suite.

- HP Command View EVAperF performance monitoring software allows you to monitor and display EVA performance metrics for replication data, host connection data, port status, host port statistics, storage controller data, physical disk data and virtual disk data. You can display performance metrics graphically in the Windows PerfMon utility, or display metrics in tabular form in a command prompt window (using EVAperF software from the command line). You can also output the metrics in tabular data in CSV (comma-separated value) or TSV (tab-separated value) format for use with external applications, such as Excel. Check HP.com for the latest HP Command View EVAperF software white paper and or the latest HP Command View EVAperF software updates.

HP Replication Solutions Manager Software

- The Replication Solutions Manager Software integrates with HP P6000 Business Copy Software and HP P6000 Continuous Access Software for local and remote replication. This results in a unique, cost effective disaster recovery solution, with less effort to configure offering value to IT and its resources. Automated scripts, wizards, and Interactive Replication Topology Viewer reduce complexity and provide greater flexibility of executing tasks. RSM is included in each Command View media kit.

WEBES support

- Free HP services software, which delivers phone-home and real-time diagnosis of hardware events, from single errors or faults to multiple event correlation and complex analysis with comprehensive notification.

Support Services Included with License to use (LTU)

- Includes one year of Software Support 9 x 5 HP Care Pack Service (includes software technical support 9 x 5 and software product and documentation updates)

Storage Device Management

HP Storage Essentials Suite

- A storage management software suite for heterogeneous, multivendor network storage, that monitors performance, automates tasks, simplifies procedures & processes and lowers costs for enterprise customers. Refer to Storage Essentials Enterprise Edition SRM software on HP.com for more information.
<http://h18006.www1.hp.com/products/storage/software/e-suite/se-index.html>

HP Storage Essentials Performance Edition SRM Software

- HP Storage Essentials Performance Edition software provides path aware performance management of your HP disk arrays (P6000/EVA and P9000/XP) and the storage area networks (SANs) around the disk arrays to optimize and report on storage performance and availability. It supports heterogeneous applications (Oracle, SQL Server, Sybase databases, Exchange application) and heterogeneous servers including VMware as well as SAN devices from diverse vendors.. It provides detailed performance information for P6000 EVA Disk Arrays and provides performance metrics for the SAN. For more information on SEPE refer to: <http://www.hp.com/go/SEPE>

HP Systems Insight Manager

HP Systems Insight Manager is the clear choice for managing HP servers and storage by being the easiest, simplest and least expensive way for HP system administrators to maximize system uptime and health.

- Hardware level management for HP ProLiant, Integrity, and HP 9000 servers; HP BladeSystems; and HP P2000, P6000, and P9000 storage arrays
- Integrated with HP Insight Remote Support Advanced, provides contracts and warranty management , and automates remote support
- HP's unified infrastructure management strategy foundation with the Essentials plug-ins
- Enables control of Windows, HP-UX, Linux, and NonStop environments

Refer to the HP Systems Insight Manager home page for more information
<http://h18013.www1.hp.com/products/servers/management/hpsim/index.html>

Electronic Software Delivery

Electronic software is now available in most countries. HP recommends purchasing electronic products over physical products when available for faster delivery and the convenience of not having to manage-either file away or throw away-confidential paper licenses. For more information, please contact an HP representative.

Hardware and Software Prerequisites

For detailed specifications about supported operating systems, adapters and switches, visit Single Point of Connectivity Knowledge (SPOCK) website:

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

HP P6000 Command View Device Management Deployment Options

The array-based management version is supported on the EVA P6300, P6350, P6500 and P6550 EVAs and is installed on the management module within the controller enclosure, which reduces the need for a management server in many configurations.

Array-Based Management Deployment

Storage Device Management

Array-Based Management (ABM) is defined as running HP P6000 Command View management software on the embedded management module on the P6300, P6350, P6500, P6550 or EVA4400 disk arrays. A management server is still required to access certain features not available in an array-based management module configuration. Those features are:

- Ability to manage more than one array with a single instance of Command View software. P6000 CV/ABM manages only one array at a time.
- Remote replication environments using Continuous Access, Cluster Extension (CLX) or Metro Cluster software.

Deployment of the following array management software is different when used with CV/ABM:

- HP P6000 Command View EVAPerf should be installed on a Windows server with a Fibre Channel connection to the array.
- HP P6000 Storage System Scripting Utility (SSSU) should be installed on a server with Ethernet access to P6000 Command View/ABM.
- HP P6000 SMI-S should be installed on a Windows server with Ethernet access to P6000 Command View/ABM. This impacts Systems Insight Manager (SIM) and Storage Essentials software.
- HP Insight Remote Support Advanced Software (HP Insight RSA) is not supported with Command View/ABM. HP Insight Remote Support Standard (Insight RSS) is not supported with Command View/ABM.
- HP Insight Remote Support Standard (Insight RSS) is supported with Command View ABM.

Refer to the HP Enterprise Virtual Array Compatibility Reference Guide and HP P6000 Command View Installation guide for additional hardware and software requirements. These documents are located at:

www.hp.com/support/manuals

Under storage, select Storage Software and then select HP P6000 Command View EVA Software under Storage Device Management Software. The compatibility reference is listed in the General reference section.

Server-Based Management Deployment

Server-Based Management is defined as running HP P6000 Command View management and replication software on a management server. The management server can be a general-purpose server or dedicated management server, or an HP X3000 or HP X1000 Network Storage System (NAS). HP P6000 Command View software can be installed on a management server connected to the EVA P6000, providing management of multiple HP EVA P6000 storage systems. All components of the software suite (HP 6000 Command View Software, HP P6000 Performance Advisor, HP P6000 SmartStart Software, HP Replication Solutions Manager Software, HP P6000 Command View EVAPerf, HP Storage System Scripting Utility, SMI-S EVA) are installed. Server-based management is applicable to all P6000 EVA models.

P6000 Command View software will run on any general purpose server (including c-class and p-class blades) or dedicated management server that meets the following hardware requirements:

- X86 and x64 architectures are supported
- 1.26Ghz processor (minimum)
- 2 GB memory (minimum) 4 GB (recommended) 4 GB for HP P6000 Command View 10.2 or later
- Disk Space Requirements:
 - 200 MB for HP Command View software installation
 - 2 GB for HP Command View log files

Storage Device Management

- 10 MB for each managed array
- 550 MB for HP Replication Solutions Manager
- Additional 300-400 MB for HP Replication Solutions Manager installation to accommodate log and database growth
- 10/100 Mbps for RSM server to RSM host agent connectivity

Command View software will run on the following HP StoreEasy Storage (see note) or ProLiant Storage Servers

- HP StoreEasy 3830 Gateway Storage
- HP StoreEasy 1830 Gateway Storage
- HP StoreEasy 1430 Gateway Storage
- HP StoreEasy 3830 Gateway Storage Blade
- HP X3800 G2 Network Storage System
- HP X3400 G2 Network Storage System
- HP G2 Network Storage System
- HP X3800sb G2 Network Storage Blade
- HP ProLiant DL380 G5 x64 SAN Storage Server or later model
- HP ProLiant DL380 G5 x64 Base Storage Server or later model

NOTE: Command View can be run on HP StoreEasy Storage products, but it requires the installation of the Desktop Experience on the StoreEasy and the installation of a Command View supported web browser. HP has not fully tested this type of Command View installation and thus there is potential for unpredictable performance or other unknown issues to occur on the StoreEasy product.

HP supported deployment options	General-purpose server	Dedicated Management server	HP StoreEasy 1000 or 3000 Storage or X3000 62 or X1000 Network Storage System (NAS) and Gateways
P6000 EVA device management deployment definition	A Windows server that runs customer applications, for example, email, file and print services along with HP P6000 Command View software	Dedicated Management server A Windows server that is intended for use with all HP OpenView SOM software including HP OpenView Storage Node Manager or other OpenView Storage Area Manager software. You can also install HP Command View software on this same server without OpenView Storage Area Software and manage EVAs as a dedicated management server configuration.	Similar configuration to a general purpose server but in this case the server can be used for managing EVA P6000s in the SAN as well as traditional NAS-based applications.
Operating system platform kit v3.0e ~OR~ Storport Driver	Supported	N/A	Supported

Storage Device Management

HP Replication Solutions Manager 5.5	Supported	Supported	Supported
WEBES (included with Command View EVA media)	Supported (HP Services obligation required)	Supported (HP Services obligation required)	Supported (HP Services obligation required)
Insight Remote Support	Supported (HP platforms only)	Supported (HP platforms only)	Supported (HP platforms only)
HP Storage Essentials-Enterprise Edition	Not supported	Supported	Not supported
		NOTES: 1. A dedicated management server is required for Storage Essentials software 2. Deployment on a separate management server from HP SIM or a combined management server with HP SIM supported. 3. A Windows or Linux management server supported.	
HP Storage Essentials-Performance Edition	Not supported	Supported	Not supported
		NOTES: 1. A dedicated management server is required for Storage Essentials software 2. Deployment on a combined management server with HP SIM supported. 3. Windows management server supported.	
Command View EVA Cluster Failover on a Windows Server	Not supported	Not supported	Not supported
Number of HP EVA P6000s supported	16. (Best practice suggest managing up to 8 EVAs)	16. (Best practice suggest managing up to 8 EVAs)	16. (Best practice suggest managing up to 8 EVAs)
HP P6000 Command View software and HP P9000 Command View coexistence on same Windows server	Supported	Supported	Supported
HP P6000 Command View for Tape Libraries and later and HP Command View software coexistence	Supported	Supported	Supported
Microsoft Operations Manager support (MOM)	Yes with HP Management Pack for MOM 2007	Yes with HP Management Pack for MOM 2007	Yes with HP Management Pack for MOM 2007

Storage Device Management

Recommended server	HP ProLiant DL380 G5	HP ProLiant DL380 G5	HP X3400 Network Storage System
Operating system	Microsoft Windows Server 2003 or 2008 Enterprise Edition or Standard Edition	Microsoft Windows Server 2003 or 2008 Enterprise Edition or Standard Edition.	Microsoft Windows Storage Server 2008 (Enterprise Edition)

Browser support

This table lists the supported browsers you can use to access HP P6000 software user interfaces. If the browser version you are using is earlier than what is listed here, you must upgrade your browser. When using HP Management Integration Framework, a minimum of Adobe Flash Player 10 is required on the browser you are using.

Browser	Version
Firefox	3.0 or later
Internet Explorer	7.0 or later

Scripting

Command View EVA Software ships with the HP Storage System Scripting Utility software (SSSU), a powerful scripting utility that reduces training and simplifies repetitive management tasks. The SSSU provides a host to array communications bridge for documenting and automating P6000 EVA local and remote configuration tasks. For a comprehensive list of supported operating systems for SSSU, please refer to the latest HP P6000 Enterprise Virtual Array Compatibility Reference Guide at:

<http://bizsupport.austin.hp.com/bc/docs/support/SupportManual/c01525950/c01525950.pdf>

Supported Software

This table lists the controller software and layered applications that are supported with HP P6000 Command View software

NOTE: Refer to the HP P6000 EVA compatibility matrix for specific versions and restrictions, if any.

NOTE: HP Command View, HP Storage Essentials and HP Systems Insight Manager are not qualified to run on the same Microsoft Windows-based server.

Layered Application Support	<p>HP Replication Solutions Manager Software</p> <p>HP Data Protector</p> <p>HP Configuration Collector</p> <p>HP Command View for Tape Libraries</p> <p>HP P9000 Command View AE</p> <p>HP Cluster Extension Software</p> <p>HP Storage Essentials Enterprise Edition</p> <p>HP Storage Essentials Performance Edition</p> <p>HP Navigator</p> <p>HP Systems Insight Manager</p>
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* Please contact your local HP Services Representative for further support information and to request installation of these products. Please see the, [Additional Sources of Information](#) section located at the end of this document for general product information.

Licensing

- All P6000 software products offer only frame based licenses; only one license is required to enable software on an array irrespective of capacity on that array. We do not provide the 1 TB capacity licenses from P6000 series onwards. P6000 software licenses are not transferable from one array to another. P6300 LTUs work on the new EVA P6350 arrays. Order the P6300 LTUs for the EVA P6350. P6500 LTUs work on the new EVA P6550 arrays. Order the P6500 LTUs for the EVA P6550.

Storage Device Management

Distribution Media

What's in the Box

- HP Command View EVA Software suite includes 3 DVD/CDs with on-line docs, software executables and Installation Instructions.
- 1 DVD P6000 Command View Software v10.3, P6000 SmartStart v4.1 for Windows, and HP Storage System Scripting Utility v10.3 Software
- 1 DVD RSM v5.5 Server, RSM v5.5 Host Agents and Documentation
- 1 CD P6000 SmartStart v4.1 Software for Linux

Documentation

- HP P6000 Command View EVA Installation Guide
- HP P6000 Command View EVA User Guide
- HP P6000 Command View EVA online help
- HP Storage System Scripting Utility Reference
- HP P6000 EVA Software Compatibility Reference
- HP P6000 Command View EVA10.3 release note

HP P6000 Performance Advisor Software

Overview

HP P6000 Performance Advisor Software provides an intuitive, easy to use, performance monitoring and troubleshooting interface for the HP EVA P6000 Performance Advisor software is well integrated with the HP P6000 Command View Software for single pane of glass management and performance monitoring. Single tool provides performance data for EVA P6000 and the prior generation EVA 4x00, 6x00, 8x00. Performance Advisor provides a dashboard display with live and historical performance data and also highlights performance data that require user attention. Performance Advisor software provides advanced reporting and charting options to define and monitor key performance indicators. It also has the ability to generate customized reports with multiple charting options, which can help troubleshoot performance issues.

What's New

- Performance Advisor improvements for report generation

Models

Product Name	Product Number
HP P6300/EVA 4400 Performance Advisor Software LTU	TC361A
HP P6500/EVA 6400 Performance Advisor Software LTU	TC362A
HP EVA 8400 Performance Advisor Software LTU	TC363A
HP P6300/EVA 4400 Performance Advisor Software E-LTU	TC361AAE
HP P6500/EVA 6400 Performance Advisor Software E-LTU	TC362AAE
HP EVA 8400 Performance Advisor Software E-LTU	TC363AAE

NOTE:

P6300 LTUs work on both the new EVA P6350 Storage arrays and P6300 arrays.
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Product

Highlights/Benefits

Integrated easy to use performance monitoring interface

- P6000 Performance Advisor Software is well integrated with Command View Software to provide single pane of glass management and performance monitoring
- Single tool provides performance data for EVA P6000 and the prior generation EVA 4x00, 6x00, 8x00

Easy to understand Dashboard display

- Advanced Dashboard display for easy understanding of live and historical performance data

Storage Device Management

- Alerts users on parameters that need attention
- Advanced Reporting and Charting options

Provides ability to define and monitor key performance indicators

- Ability to generate customized report with multiple charting options
- Advanced reporting capabilities to help troubleshoot performance issues

HP P6000 SmartStart Software

Overview

HP P6000 SmartStart Software delivers specific startup support for the HP EVA P6350/P6550 Enterprise Virtual Array. It is a simple to use, software wizard that will get the new EVA user up and running in a minimum of mouse clicks. With extensive help features and on screen instruction, P6000 Smart Start Software will aid in the installation of HP P6000 Command View Software, install and setup the host HBA and Multipath software, perform initialization and configuration of the EVA disk groups, presentation of EVA virtual disks and host configuration of the EVA presented LUNs. Version 4.1 is included in each P6350/P6550 SAN Starter Kit. It can also be ordered independently to provide the same benefits for other HP EVA P6000 series models. HP P6000 SmartStart software is included in the P6000 Command View Software Suite.

Models	HP P6000 Command View v10.3 Software Suite	T5494K
	HP P6000 Command View v10.3 E-Software Suite	T5494KAE

Product

HP P6000 Smart Start Software is a configuration utility that simplifies the startup of EVA P6350/P6550 storage disk array.

Highlights/Benefits

- Through onscreen instructions and help it will guide the customer through the installation of HP P6000 Command View Software on a management server. P6000 Command View comes pre-installed on your HP P6000 EVA array hardware.
- HP P6000 SmartStart Software installs Command View software on all P6000 and EVA 4xxx/6xxx and 8xxx arrays.
- P6000 SmartStart Software has a low memory footprint. The software resides in memory and does not require to be installed on the host
- SmartStart Software being a single user, single threaded has both the client and the server on the same host.

HP P6000 Thin Provisioning Software

Overview

HP P6000 Thin Provisioning provides the ability to create a vdisk such that the operating system sees more capacity available than is physically allocated by the array. As the OS writes data to the vdisk, the firmware will automatically allocate more space up to the size of the vdisk.

What's New

Thin Provisioning support for EVA P6000 array family

Product

Optimized disk capacity

Highlights/Benefits

Vdisks share the same physical space within a virtualized storage pool, allowing multiple servers and applications to access the data, maximizing the use of disk capacity, and eliminating storage silos and stranded storage.

Lower initial CAPEX

Storage Device Management

Optimizing disk capacity means that newly purchased storage systems require less initial storage, presenting an opportunity to defer capital expenditures (CAPEX).

Lower long-term CAPEX

CAPEX over the long run is significantly improved in a number of ways. First, disk purchasing no longer needs to be based on guesstimates of data growth for individual applications; thin provisioned Vdisks will utilize disk space not presently used by other applications and provide it to high-growth applications. Second, thin provisioning eliminates losing capacity to stranded storage. These efficiencies allow managers to defer disk purchases—in some cases, for several quarters—to some point in the future where both disk prices and the net present value of budgets are likely to be lower.

Greener IT

Allowing more servers to share a single thin provisioned storage system encourages storage system consolidation, reducing system proliferation and simplifying IT operations that may have been complicated by the addition of virtualized servers to the data center. Allocating minimal amounts of storage to each user or process eliminates wasteful over-provisioning. Because a smaller number of efficiently used storage devices can service a comparatively large number of client processes, data centers have lower power and cooling requirements, can reduce floor space, and have a reduced carbon footprint, all contributing to "greener" storage operations.

Easy capacity growth

Thin provisioning is automated, spawning an alert when utilization approaches a specified threshold. Adding extra capacity requires no re-provisioning.

Reduced IT complexity

- Allowing multiple applications and servers to access a flexible storage pool eliminates the overhead associated with managing stranded storage. Because more disk space is available, data that was once spread over multiple silos within the data center (and beyond) can be consolidated onto fewer arrays. Automated thin provisioning reduces management requirements associated with disk provisioning, and consolidates management within a single, standards-compliant command console.

Licensing

Thin Provisioning is included free along with the P6000 Command View Software. Thin Provisioning license enablement key is included along with the P6000 Command View license. We do not provide the 1 TB licenses from P6000 series onwards. The licenses are not transferable from one array to another.

Storage Replication Management

HP Dynamic Capacity Management Software

Overview

HP Dynamic Capacity Management Software provides a comprehensive solution that automates storage provisioning and improves capacity utilization on the HP EVA P6000 family. Designed for the enterprise market, DC-Management Software uses advanced automation to automatically "right-size" the supported file system and the EVA P6000 Vdisk storage volume to the needs of an application. This dramatically improves capacity utilization by allowing the administrator to simply specify a capacity utilization range of the Vdisk. In some cases, P6000 EVA DC-Management Software can more than double storage utilization when compared to traditional storage provisioning methods where utilization may be as low as 20% to 40%. Configuring EVA DC-Management Software policies takes just seconds with its effortless wizards and advanced automation. The simple "set and forget" provisioning not only reduces the resource cost of ongoing storage provisioning, but also allows for the potential postponement of additional capacity purchases due to increased storage utilization. This also helps reduce the operational costs of powering and cooling unnecessary storage while helping the environment by lowering the enterprise's carbon footprint.

What's New

Support for EVA P6350/P6550 Storage

Product Highlights

Automated provisioning for increased storage utilization

File systems and storage volumes are automatically expanded online as application needs increase, or shrunk to reclaim unused capacity that can be returned to the disk group for use by other applications

Simple and Quick set up and configuration

It takes just seconds to configure, or change policies across multiple volumes. Once they are set, capacity provisioning and reclamation are automatic allowing the administrator to focus on other business critical tasks.

Reduces capital and operational expenses

Achieving higher capacity utilization rates reduces the need to purchase excess storage capacity and software licenses. In addition, higher utilization results in less power and cooling requirements by reducing the need for unnecessary disk drives.

Accelerates storage consolidation

Improved capacity utilization allows more applications to be deployed on the same storage Array Management flexibility for greater control. The flexible architecture allows the administrator to easily switch between automatic and manual modes to quickly adapt to changing business needs. Protects valuable data. Valuable data is protected by integrating host and storage operations during expand and shrink cycles.

Licensing

Dynamic Capacity Management software is included free along with the P6000 Command View Software. DCM license enablement key is included along with the P6000 Command View license. We do not provide the 1 TB licenses from P6000 series onwards. The P6000 software licenses are not transferable from one array to another.

HP P6000 Business Copy Software

Overview

HP P6000 Business Copy Software is an array based application that utilizes a powerfully simple HP Replication Solutions Manager GUI to create, manage and configure local replication on the HP EVA P6000

Storage Replication Management

Storage family. Business Copy Software shares an integrated management interface with HP Continuous Access Software. The replication solutions manager manages all local and remote replication features across the full P6000 family. With the combination of the Business Copy's unique MirrorClone, Snapclone and Vsnap local replication technologies and an unparalleled easy to use replication manager interface, businesses now can achieve new IT efficiencies.

What's New

Dynamic LUN/RAID migration capabilities

Product Highlights

HP Business Copy offers Simplicity without Compromise! Not only is managing replication easier, it also results in the ability to make replication:

- Less expensive through faster, automated space efficient methods
- More accessible to other groups that can non-disruptively use production data for other key business activities
- Less labor intensive allowing a much greater use of valuable IT people resources

Models

Product Name	Product Number
HP P6300 Business Copy SW LTU	TA826A
HP P6300 Business Copy SW E-LTU	TA826AAE
HP P6500 Business Copy SW LTU	TA827A
HP P6500 Business Copy Software E-LTU	TA827AAE
HP P6300 Upgrade to P6500 Business Copy LTU	TA828A
HP P6300 Upgrade to P6500 Business Copy E-LTU	TA828AAE

NOTE:

P6300 LTUs work on both the new EVA P6350 Storage arrays and P6300 arrays.

P6500 LTUs work on both the new EVA P6350 Storage arrays and P6300 arrays.

Software/Hardware

EVA 6300/P6350, P6500/P6550 with XCS 10.00.00.00 version or later

Prerequisite

Business Copy EVA

Advanced replication local replication functions supported by the array firmware include the ability to create modify and delete snapshots and clones. Other functionality such as mounting and unmounting of volumes and interaction with production applications can be accomplished by using a scripting language such as the HP Storage System Scripting Utility (SSSU) to create user-defined scripts or via the new CLUI. Users can also manage both local and remote replication tasks through the use of HP Replication Solutions Manager graphical user interface described in the next section. Single path configurations are supported. Snapshots and clones are useful tools to facilitate data restores, minimize downtime for backups, perform application testing, support data mining, and use in decision support tools.

Two methods for generation of basic local point-in-time copies through Business Copy EVA include (See Replication Solutions Manager section for information on advanced management):

- HP P6000 Command View can be used to create Snapshots, MirrorClones, Snapclones and Vsnaps through a graphical user interface. This software runs on the Storage Management Appliance or Windows based server in the SAN and can be accessed via a web browser.
- HP Storage System Scripting Utility (SSSU) is included with the platform kits and can be used to generate scripts on the host server to create snapshots, Vsnaps, MirrorClones and Snapclones. User defined scripts can be created using this tool to manage replication at the array level.

Descriptions:

Snapshots: A standard snapshot (full allocated) is a point-in-time virtual copy of the data, created in seconds and usable immediately, providing maximum flexibility for user applications. Disk capacity is reserved to accommodate the original size of the source volume. This process may be completed by allowing HP P6000 Business Copy software to automatically execute all tasks in the snapshot creation, or

Storage Replication Management

by creating a target container (3-Phase) to accelerate the snapshot creation. Please review the HP P6000 Business Copy documentation for more information on this feature.

Vsnaps: Virtually capacity free snapshots (demand allocated) allow the user to create a point-in-time copy, or demand allocated snapshot, of a specified Virtual Disk (LUN). Vsnap is similar to the standard snapshot (fully allocated) except that it does not reserve the same amount of disk capacity as the production volume being copied. The amount of disk capacity used by the copy volume will grow as data in the production volume changes over time or if the Vsnap is set to read/write, and data is written directly to the Vsnap. The result is that a Vsnap is a true space-efficient copy where capacity is not wasted reserving space. This saves valuable capacity and reduces workload by automatically using space as needed.

MirrorClone: MirrorClone provides an alternative to a snapshot by allowing the user to make a full, byte-for-byte, point-in-time copy of a source LUN that can be mounted to a secondary server. MirrorClone will track all changed blocks and can re-sync with the source LUN to create a new point-in-time copy, or can be used to instantly restore the source.

Snapclones: A Snapclone is a complete clone copy of a specified Virtual Disk (LUN). With traditional arrays, a clone can take hours to build depending on its size. Unlike traditional clones, HP Business Copy EVA Snapclones are available virtually immediately. Within a few seconds of when the Snapclone is taken, the entire clone copy is available for use. The Snapclone normalizes in the background so that no time is wasted waiting for the copy to complete. Enterprise Snapclones can also be taken in any redundancy level (RAID 0, 1, or 5). Snapclones provide the ability to take and use a clone without extensive advance preparation. Long "re-synch" times are also eliminated with Snapclones since a current clone copy can be available for use in minutes, not hours. Snapclones can also be created in different disk groups allowing users to copy the data to lower cost drives such as FATA. This process may be completed by allowing HP P6000 Business Copy software to automatically execute all tasks in the Snapclone creation, or by creating a target container (3-Phase) to accelerate the Snapclone creation. Please review the HP P6000 Business Copy software documentation for more information on this feature.

Dynamic LUN/RAID migration: Dynamic LUN/RAID Migration is a P6000 Business Copy software feature that supports multiple tiers of storage and simplifies the repetitive and costly task of data migration among these tiers. Infrequently used data can be moved easily to more space-efficient RAID levels and lower-cost HDDs, and can be moved back to higher performance drives when needed. This requires little operator intervention, reduces the risks historically associated with moving data, and reduces performance slowdowns. Importantly, data remains continuously available so that data migration imposes fewer interruptions to IT operations. The result is an opportunity to save on storage capital and operational expenses, to increase data availability and I/O performance, and to configure data protection appropriate for the value of the data.

Cross Vraid Snapshot and Snapclones: EVA allows for increased flexibility and improved capacity utilization by supporting changing the Vraid type with Cross Vraid Snapshot and Snapclone, within the same disk group and Cross Vraid Snapclone across disk groups. Cross Vraid Snapclone also supports changing the Vraid type when Snapcloning from a high performance disk group to a FATA disk group.

Instant Restore: Users can restore a source volume using a normalized Snapclone, MirrorClone, MirrorClone Snapshot, Snapshot or any other Vdisk of the same size. This allows for quick recovery of a source should the volume become corrupted.

HP Replication Solutions Manager graphical User Interface

HP P6000 Business Copy software comes complete with HP Replication Solutions Manager software, a graphical user interface and scripting environment, that greatly simplifies storage management by creating, running, and managing storage replication jobs using controller based snapshots and clones. This interface simplifies the complex tasks involved with utilizing controller-based snapshot and clone

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technology.

With HP Replication Solutions Manager software users can easily manage both remote* and local replication* across the full EVA product family. By virtually removing the complexity associated with both small and large replication environments, point-in-time copies and remote replication are managed and configured with just a few mouse clicks. To assist the user, information on the replication environment is presented in a variety of views, including an interactive topology manager that allows each user to select their viewing preference. In addition, HP Replication Solutions manager provides a scripting interface for additional flexibility.

HP Replication Solutions Manager is comprised of two parts, the server component that runs on the HP Storage Management Appliance, or a Windows based server in the SAN and the host agents that run on each host in the SAN to offer a more automated local replication process. For example, the host agent software provides the ability to suspend and resume database I/O, launch applications, and dynamically mount Snapshots, Vsnapshots, and Snapclones to servers.

Dependencies:

- HP P6000 Command View software
- HP P6000 Command View EVA License(s)-to-use for the EVA P6000
- HP P6000 Business Copy software License-to-use (LTU)
- General purpose server
 - Processor: 1.26 GHz (minimum)
 - Memory: 2 GB (minimum)
 - Free Disk Space: 350 MB for installation plus 10 MB for each managed array for systems without HP OpenView Storage Area Manager
 - Free Disk Space: 750 MB for installation plus 10 MB for each managed array for systems with HP OpenView Storage Area Manager

* Some features of HP Business Copy EVA are only available through HP Replication Solutions Manager EVA
All P6000 software products offer only frame based licenses; only one license is required to enable software on an array irrespective of capacity on that array. We do not provide the 1 TB licenses from P6000 series onwards. The licenses are not transferable from one array to another.

Licensing

HP P6000 Continuous Access Software

Overview

HP Continuous Access is an array based application that provides remote replication on the full HP P6000 Enterprise Virtual Array product family. HP Continuous Access Software shares RSM with HP Business Copy and HP Dynamic Capacity management Software to offer an integrated management approach. RSM manages all local and remote replication configurations, as well as, replication features across the full EVA P6000 Storage array product line. With the combination of HP Continuous Access' unique remote replication technologies and the unparalleled easy to use RSM interface, enterprises can ensure their information is protected in the event of a disaster. Furthermore, HP Continuous Access provides the necessary components to solve enterprises business continuity objectives in a very cost effective and easily deployable package. HP Continuous Access Software offers Simplicity without Compromise! Not only is managing replication easier, it also results in the ability to make remote replication 1) Less expensive through faster, automated methods that virtually eliminate complexity while resulting in fewer user errors. 2) Easy to deploy for accelerated payback and 3) Less labor intensive allowing a much greater use of valuable IT people resources.

What's New

Product Highlights

- Support for new EVA P6350/P6550 Storage Arrays
- Flexible architecture allows remote replication between EVA P6000 and the prior generation EVA



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- 4x00/6x00/8x00 array models.
- Protects existing investments and enhances business continuity planning objectives by allowing replication among the EVA family.
- Synchronous replication provides the highest level of data protection by ensuring that each write is complete at the primary site and secondary site before acknowledging the write to the host
- Asynchronous replication enables quick write completion back to the host for a faster host to storage I/O response time and typically supports longer distance replication.
- Multiple relationships provide greater storage flexibility and utilization.
- Replication Solutions Manager manages HP EVA Dynamic Capacity Management, HP Business Copy EVA and HP Continuous Access EVA from one unified, easy to use GUI on the full EVA family. This new tool dramatically simplifies managing replication and results in significantly better resource utilization.
- HP P6000 Business Copy software integration provides better efficiencies by combining the management and array technologies to create local copies.
- Fast application recovery with minimal or no transaction loss
- Support of various interconnects saves cost by utilizing a variety of existing interconnects for long distance replication and application recovery to a metropolitan, regional or continental.
- Creation of disaster tolerant copies of critical business data
- No-single-point-of-failure solution to increase the availability of critical data

Models	Product Name	Product Number
	HP P6300 Continuous Access SW LTU	TA823A
	HP P6300 Continuous Access SW E-LTU	TA823AAE
	HP P6500 Continuous Access SW LTU	TA824A
	HP P6500 Continuous Access SW E-LTU	TA824AAE
	HP P6300 Upg to P6500 Cont Access LTU	TA825A
	HP P6300 Upg to P6500 Cont Access E-LTU	TA825AAE
	HP Continuous Access EVA Software Data Migration 7TB 90 Day LTU	TA663A
	HP Continuous Access EVA Data Migration 7TB 90day E-LTU	TA663AA
	HP Continuous Access EVA SW Data Migration Unlimited 90 Day LTU	TA664A
	HP Continuous Access EVA SW Data Migration Unlimited 90 Day E-LTU	TA664AAE

NOTES:

- P6300 LTUs work on both the new EVA P6350 Storage arrays and P6300 arrays. P6500 LTUs work on both the new EVA P6350 Storage arrays and P6300 arrays.
- The Data Migration Licenses TA663A (AE) and TA664A (AE) are model agnostic and work across all EVA models; however they require Command View version 9.0 or higher.
- HP Data Migration LTUs can be combined with HP Continuous Access LTUs
- Licenses obtained through the Not-For-Resale (NFR) program, temporary licenses, loaner licenses, Instant-on or any other license at no charge are provided strictly for evaluation and demonstration use and cannot be used for data migration.

Remote Replication

HP P6000 Continuous Access EVA is a Fibre Channel storage controller-based data replication (remote mirroring) solution to support disaster recovery requirements. HP P6000 Continuous Access software works with the HP EVA P6350, P6550 and the prior generation EVAs.

The following replication scenarios with P6000 EVA models are supported

- EVA 4x00/6x00/8x00 <-> P6350/P6550 EVA
- EVA 4x00/6x00/8x00 <-> P6300/P6500 EVA

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- EVA 3000/5000 <-> EVA 4000/EVA 6000/EVA 8000/EVA 4100/EVA 6100/EVA 8100
- EVA 3000/5000 -> P6300/P6350/P6500/P6550 EVA/EVA 4400/EVA 6400/EVA 8400 (Migrate Only)*

***NOTE:**

- Unidirectional data migration from EVA 3000/5000 to P6300/P6500 EVA s is supported using Continuous Access features
- P6300/P6500 EVA to EVA 3000/5000 replication will NOT be supported
- Fabric support will be as specified in the SAN Design Guide.
- Refer the P6000 EVA software compatibility guide for the exact firmware versions supported and other limitations

Licensing

All P6000 software products offer only frame based licenses; only one license is required to enable software on an array irrespective of capacity on that array. We do not provide the 1 TB licenses from P6000 series onwards. EVA licenses are not transferable from one array to another array.

HP Cluster Extension Software

Overview

HP Cluster Extension Software offers protection against application downtime from fault, failure, or site disaster by extending a local cluster between data centers over metropolitan distance. CLX reinstates critical applications at a remote site within minutes after an adverse event and integrate with the OS clustering software (MS Cluster Service in Windows and native clusters on RedHat and SuSe in Linux), HP Continuous Access Software for P6000 to automate failover and failback between sites. This dual integration enables the cluster service to verify the status of the storage as well as the server cluster; thus allowing the correct failover and failback decisions to be made which minimize downtime, and accelerates recovery - without human intervention. Thus the Cluster Extension software can help customers achieve 'zero' RPO and RTO in minutes or seconds.

What's New

Support for P6300/P6500 EVA

Models

Product Name	Product Number
HP P6000 Cluster Extension Windows LTU	TC340A
HP P6000 Cluster Extension Linux LTU	TC341A
HP P6000 Cluster Extension Windows E-LTU	TC340AAE
HP P6000 Cluster Extension Linux E-LTU	TC341AAE

Protection against transaction data loss Because the application cluster is extended over two sites and the storage is replicated at the second site using synchronous replication methodology, data exists ubiquitously with virtually no difference in the data storage from site A to site B. No-single-point-of-failure solution to increase the availability of company and customer data

Metropolitan distance support Distance supported is determined by Continuous Access EVA relay latency parameters. In both Windows and Linux configurations, 500km or up to 20 ms roundtrip delay furnishing protection from any single site event.

Fully Automatic Failover and Failback Automated failover and failback reduces the complexity involved in a disaster recovery situation. It is protection against the risk of downtime, whether planned or unplanned.

No server reboot Disks on the Server on both the primary and secondary sites are recognized during the initial system boot in a CLX EVA environment; therefore LUN presentation and LUN mapping changes are not necessary during failover or failback - for a truly hand-free disaster tolerant solution.

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Disaster Tolerance (DT) vs. Disaster Recovery (DR)	Cluster Extension is the key that unlocks the critical difference between disaster recovery (DR) and disaster tolerance (DT). Most DR products pledge that operations will resume following downtime (typically unexpected). CLX EVA delivers DT - control over the possibility of downtime itself.
No Single Point of failure	Supreme redundancy: identical configuration of established SAN infrastructure redundancies are implemented on site B.
Synchronous mode Support	Continuous Access EVA offers synchronous data transfer mode between arrays and host. Synchronous data transfers offer the highest levels of data protection. With synchronous operations, both the source and destination copies are identical and concurrent at all times. Synchronous mirroring ensures that data copies are identical, to prevent critical data loss in the event of a failure or disaster. In this mode, data is written simultaneously to the mirrored cache of the local storage system and the remote storage system, in real time, before the application I/O is completed, thus ensuring the highest possible data consistency. Synchronous replication is appropriate when exact consistency is critical to the business application.

Licensing

HP Cluster Extension is licensed per server. One license is required for each node of the cluster that will contain CLX resources, intended for failover and failback in the event of failure. A license is not required for the Quorum server (assuming that the CLX Resource is not installed on the Quorum server) and cluster nodes that do not have the CLX resource installed.

More Information

Refer HP Cluster Extension Software product page for more information
<http://h18000.www1.hp.com/storage/software/ces/index.html>

Software/Hardware Prerequisite

Please refer the HP Cluster Extension Software quickspecs
http://h18000.www1.hp.com/products/quickspecs/13727_div/13727_div.pdf

Licensing

HP Cluster Extension is licensed per single server. One license is required for each node of the cluster that will contain CLX resources*, intended for failover and failback in the event of failure. A license is not required for the Quorum server (assuming that the CLX Resource is not installed on the Quorum server) and cluster nodes that do not have the CLX resource installed.

Metrocluster and Continental Clusters

Overview

Metrocluster and Continental clusters offer the most robust recovery mechanisms in the HP-UX 11i suite of geographically dispersed clusters that also includes Extended Distance Cluster.

Product Highlights

- Automatic and bi-directional failover of mission-critical data and applications so both data centers can be active, protected and capable of handling package failover to each other. Metrocluster also supports manual site switching for added flexibility.
- Support for three data center disaster recovery configuration for all types of workloads
- Cluster can be stretched up to 300km, support for up to 16 HP Integrity and HP 9000 servers
- Robust, reliable fast fail-over and fail-back via array-based data replication
- Integration with Serviceguard Manager for centralized GUI based configuration, monitoring and administration of Metrocluster packages
- Metrocluster support for cluster verification which helps verify that the cluster is configured correctly with a single easy to use command
- Disaster Recovery Rehearsal feature for Continental clusters for both two data center and three data center architectures for increased availability and greater readiness
- Optimized resource utilization and performance with HP-UX Workload Manager and On-Demand Solutions
- Special integration for Oracle 11g RAC databases with SGeRAC
- Integration with HP Insight Dynamics - VSE capabilities such as capacity planning, workload management, infrastructure orchestration, Utility Pricing solutions, HP Virtualization Continuum for

Storage Replication Management

HP-UX solutions and Integrity Virtual Machines

For more information please refer to:

Metrocluster - <http://h71028.www7.hp.com/enterprise/w1/en/os/hpux11i-serviceguard-metrocluster.html>

Continentalcluster - <http://h71028.www7.hp.com/enterprise/w1/en/os/hpux11i-serviceguard-continentalclusters.html>

Service and Support, HP Care Pack, and Warranty Information

Service and Support

Technology Services for increased uptime, productivity and ROI

TRUST HP storage technology experts for every level of service and support. Our integrated portfolio of Services for storage help customers reduce costs, optimize data, streamline storage management, and improve backup and recovery. Capitalizing on HP Storage Systems' capabilities requires a service partner who understands your increasingly complex environment. Team with the people who know HP infrastructure hardware and software best—the experienced professionals at HP Services.

Protect your business beyond warranty

Warranty protects against manufacturer defects, however warranty uplifts, such as HP Care Pack Services protect the business—by reducing downtime risks and providing operational consistency for mission-critical and standard business computing.

What HP Storage Technology Services can do for you

HP Storage Technology Services can help you

design, deploy, test, integrate, support, and manage IT and infrastructure solutions. HP storage lifecycle support services offers a full spectrum of customer care—from technology support to complex migrations to complete managed services.

Choose the right level of support, deployment and integration services

HP support recommendations are designed to help you enhance technology operations and lower risk—and make it easier for you to seek the right balance between affordability and service-level commitments. Depending on your individual support needs, choose from three levels of care that cover the entire lifecycle to better address your needs—Optimized Care, Standard Care, and Basic Care. If none of our support recommendations meet your needs, we can tailor a service solution for your unique support requirements. Only HP brings together deep expertise, proactive and business critical support and a strong partner network—plus, a full set of infrastructure services designed to power a Converged Infrastructure.

Optimized Care - delivers best performance and stability through deployment and proactive management practices

HP Proactive Care 24x7- for a higher return on your storage investment, Proactive Care delivers hardware and software support services designed specifically for your technology; rapid access to Advanced Solution Center Specialists plus, Firmware/Software management and best practice advice. Customers can optimize the return on their IT investment and realize the advantage of running their business critical applications on virtualized/x86 infrastructure.

Plus, 40 credits per year, select from an extensive menu of consultancy and technical services, such as onsite firmware upgrades, health checks, assessments, and education.

Standard Care - maintains high level of uptime, along with expert help to cut the cost and complexity of implementation and support

HP Proactive Care 24x7- for a higher return on your storage investment, Proactive Care delivers hardware and software support services designed specifically for your technology; rapid access to Advanced Solution Center Specialists plus, Firmware/Software management and best practice advice. Customers can optimize the return on their IT investment and realize the advantage of running their business critical applications on virtualized/x86 infrastructure.

Plus, 30 credits per year, select from an extensive menu of consultancy and technical services, such as onsite firmware upgrades, health checks, assessments, and education.

Basic Care - Minimum recommended support

Support Plus 24-For a higher return on your server and 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.

Service and Support, HP Care Pack, and Warranty Information

Plus, 10 credits per year, select from an extensive menu of consultancy and technical services, such as onsite firmware upgrades, health checks, assessments, and education

Implementation

Installation: Command View Installation & Support - HA124A1#5ASHP Command View EVA (CV EVA) Installation and Startup Service includes scheduling, installation, configuration and verification of Command View EVA on a dedicated management server or a general-purpose server. In addition, a customer orientation session, which covers the configuration and operation of CV-EVA, is provided. Datasheet - <http://athp.hp.com/portal/go/5982-6870>

Additional services to meet your needs

HP Storage Data Migration service

HP Enhanced Implementation Service for SANs-HP delivers complete design and implementation services for Fibre Channel, FCoE, FCIP, SAS, and iSCSI SAN connectivity components. <http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-8527EN.pdf>

Data Replication Services for Business Continuity and Continuous Access - HP Data Replication Solution Service for HP Continuous Access and Business Continuity for the HP P9000 XP Disk Family helps safeguard critical business information by providing scalable deployment of Continuous Access real-time data mirroring between local and remote P9000 XP disk arrays, with special consideration for data availability, consistency, currency and I/O performance.

Remote Support Tools

HP Insight Remote Support- Available at no additional cost to all warranty, HP Care Pack Service and service agreement customers, uses proven technology to deliver secure, reliable 24x7 remote monitoring, diagnosis and problem resolution.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-4676ENW.pdf>

For more information

www.hp.com/services/storage

To learn more on HP Storage Services, please contact your HP sales representative or HP Authorized Channel Partner

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: www.hp.com/go/lookuptool

Additional Information

Additional Sources of Information

HP Systems Insight Manager (Unified Server and Storage Management):

<http://h18013.www1.hp.com/products/servers/management/hpsim/index.html>

HP Storage Essentials Enterprise Edition: <http://h18006.www1.hp.com/products/storage/software/esuite/index.html>

HP Storage Essentials Performance Edition: <http://www.hp.com/go/SEPE>

HP P6000 Command View Software Suite:

www.hp.com/go/p6000cvs

HP Management Pack for Microsoft MOM 2005:

<http://h18006.www1.hp.com/products/storageworks/mpackmom2005/index.html>

HP Software and Storage Management Appliance white papers: <http://h18006.www1.hp.com/storage/softwhitepapers.html>

HP Education Services For more information about HP Education Services for Storage and SAN, visit:
<http://education.hp.com/curr-storsan.htm>

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