

Overview

Want to reduce IT costs and management complexity for your arrays and SANs? Need to be ready for the next set of changes?

HP Command View EVA Software provides you with a powerfully simple storage management experience, automates and aggregates storage management to reduce complexity and increase productivity. Quickly and easily automate tasks such as configuring RAID groups.

Provisioning capacity is simple, and you can dynamically expand LUNs and add drives online without downtime to quickly meet changing business needs. HP Command View EVA Software is a comprehensive software suite designed to simplify array provisioning and management of all HP EVA family of storage array products. You can easily create Vdisks and grow or shrink LUNs, all without downtime. Command View EVA Software allows you to replicate data with snapshots for immediate use. And you can feel secure about your data with the industry-leading security features.

What's New

- The following enhancements are available on EVA 4400/6400/8400
- Support for Thin Provisioning software
- Support for Dynamic LUN/RAID migration feature as part of Business Copy software
- Large LUN enhancements
 - Ability to expand/shrink large LUNs
 - Snapshot capabilities on Large LUNs
 - Thin Provisioning of Large LUNs

Customer Benefits

- Manage EVA storage simply, and provision storage quickly to changing business requirements.
- Comprehensive software suite includes everything you need to manage an EVA.
- Manage all generation of EVAs from a single image of Command View software.
- New deployment options include both server-based management and/or array-based management with the EVA4400 for simplicity and cost savings
- Centralized view of EVA storage via a single management console simplifies administration tasks
- Helps automate and aggregate storage so you have fewer steps to think about and fewer things to manage
- Simply create, document, and automate EVA commands into powerful scripts to improve IT administration efficiency for faster EVA configuration
- Improved security allows 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.
- Secure storage (LUNs) against unauthorized access so business data assets are safe
- Fibre channel or iSCSI connectivity allows you value and choice based on your business need maximizing your existing infrastructure investment
- Quickly pinpoint performance bottlenecks so applications run at optimized performance and quality of service (QoS) is maintained
- Easily provision basic snapshots, snapclones, mirrorclones and create remote mirrors via an intuitive, easy-to-use GUI and powerful CLI. NOTE: In order to dramatically simplify replication management consider taking advantage of HP Replication Solutions Manager (RSM). HP Replication Solutions Manager integrates both local and remote replication. HP Replication Solutions Manager is included at no additional charge with the purchase of either HP Business Copy EVA, or HP Continuous Access EVA
- HP Command View EVA and Systems Insight Manager helps you simply manage EVA with heterogeneous networked storage devices including servers and infrastructure



Overview

- Capture events and receive secure, proactive remote monitoring 24X7 with HP Instant Support Enterprise Edition (ISEE) to maintain maximum EVA uptime
- The new Software bundles comprising of Command View, Business Copy and Dynamic capacity manager enables our customers to manage , replicate and optimize the EVAs by purchasing a single SKU at an attractive price
- Command View Support for the EVA mpx2000 and FCoE feature enables EVA controllers to be presented as FCoE targets. This also delivers a Unified Storage platform message with FC, iSCSI, FCoE and FCIP support simultaneously



Features/Functionality

Software Features & EVA Management Solutions

Thin Provisioning Software

- Simplified array administration compared to traditional array management
 - One Command View to manage up to 16 EVA arrays
NOTE: Best practice suggests managing up to 4 EVA arrays.
 - Automate and aggregate management tasks
 - Intuitive, easy-to-use GUI
 - Online dynamic LUN expansion
 - Online dynamic LUN shrink
 - Easily add physical disks online without application disruption
 - Configure LUNs, RAID groups with just a few mouse clicks
- Deployment as Array-Based Management (EVA4400) or Server-Based Management.
- Array-Based Management eliminates the need for a separate management server in most configurations.
- 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.
- Multi-SAN EVA device discovery across a maximum of 6 SAN islands
- EVA and heterogeneous networked SAN storage device management with Systems Insight Manager; shipped with EVA
- 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
- Visually monitor and analyze EVA array performance metrics
- Instantly replicate data
- 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 through a common Microsoft Operations Manager (MOM) console
- Support for low-cost and high-capacity Fibre Attached Technology Adapted (FATA) and high performance fibre channel disk drives
- Support for Solid State Disks with the EVA4400, EVA6400 and EVA8400 disk arrays.
- RAID 6 support.
- HP Thin Provisioning for EVA 4400/6400/8400 arrays 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.

Product Highlights/Benefits:

- Optimized disk capacity



Features/Functionality

- 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**
 - 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.

Current EVAx400 customers who have upgraded to HP P6000

Command View and XCS 10000000 can obtain a thin provisioning license from Software Depot:

1. Go to <http://www.software.hp.com/kiosk>
2. When prompted, enter the following credentials:



Features/Functionality

HP Storage Scripting System Utility SSSU; included with HP Command View EVA software suite

HP Command View EVAPerf; included with the Command View EVA Media kit.

HP Replication Solution Manager

WEBES and ISEE support

Support Services Included with License to use (LTU)

HP Storage Essentials Suite

HP Storage Essentials Performance Edition SRM Software

- User name: COMMANDVIEW_THP_LTU_KIOSK
- Password: Thp_LTUs
- Comprehensive command line support
 - Host-to-array communication bridge
 - Powerful tool to document and automate tasks
- 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.
- The Replication Solutions Manager Software integrates with HP Business Copy EVA Software and HP Continuous Access EVA 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. One copy of RSM included in each Command View media kit.
- 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.
- 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)
- 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 software provides path aware performance management of your HP disk arrays (EVA and 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. HP Storage Essentials Performance Edition is the recommended performance management solution for HP EVA arrays. It provides detailed



Features/Functionality

HP Systems Insight Manager

performance information for EVA Disk Arrays and provides performance metrics for the SAN. For more information on SEPE refer to: <http://www.hp.com/go/SEPE>

- Bundled with HP Storage arrays
- HP's unified infrastructure management strategy foundation with the Essentials plug-ins
- Remote support, service tools, contracts and warranty management now integrated
- Hardware level management for HP ProLiant, Integrity, and HP 9000 servers; HP BladeSystems; and HP MSA, EVA, and XP storage arrays
- Control of your Windows, HP-UX, Linux, and NonStop environments

Refer to Storage Essentials Enterprise Edition SRM software 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

HP Command View EVA Device Management Deployment Options

The array-based management version is only supported on the EVA4400 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

Array-Based Management is defined as running HP EVA management software on the embedded management module on the EVA4400 disk array. A management server is still required to access certain features not available in a management module configuration. Example features are Continuous Access configuration, and disk drive on-line code load

Refer to the HP Enterprise Virtual Array Compatibility Reference Guide for additional hardware and software requirements. The document is located at:

www.hp.com/support/manuals

Under storage, select Storage Software and then select HP 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 EVA management and replication software on a management server. The management server can be either a general-purpose server, a dedicated management server, or a HP X3000 or X1000 Network Storage System (NAS). HP Command View EVA is installed on a management server connected to the EVA, providing management of multiple HP EVA storage systems. All components of the software suite (HP Command View EVA, HP Command View EVAPerf, HP Storage System Scripting Utility, SMI-S EVA) are installed. Server-based management is applicable to all EVA models.

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



Features/Functionality

- X86 and x64 architectures are supported
- 1.26Ghz processor (minimum)
- 2 GB memory (minimum)
- Disk Space Requirements:
 - 200 MB for HP Command View EVA installation
 - 2 GB for HP Command View EVA log files
 - 10 MB for each managed array
 - 350 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 EVA will run on the following HP ProLiant Storage Servers

- HP X3400 Network Storage System
- HP X3800 Network Storage System
- HP X1800 Network Storage System
- HP ProLiant DL380 G5 x64 San Storage Server
- HP ProLiant DL380 G5 x64 Base Storage Server
- HP ProLiant DL585 Storage Server
- HP ProLiant DL585 G2 x64 Storage Server
- HP ProLiant DL585 Dual Core Storage Server

NOTE: In most configurations, the HP X3400 Network Storage System is preferred.

| HP supported deployment options | General-purpose server | Dedicated Management server | HP X3000 or X1000 Network Storage System (NAS) |
|--|--|---|---|
| EVA device management deployment definition | A Windows server that runs customer applications, for example, email, file and print services along with HP Command View EVA and if licensed HP Business Copy EVA. | 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 EVA 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 EVAs in the SAN as well as traditional NAS-based applications. |
| Operating system platform kit v3.0e ~OR~ Storport Driver | Supported | N/A | Supported |
| HP Replication Solutions Manager 5.2 | 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) |
| ISEE remote support (Included with Command View EVA media) | Supported (HP platforms only) | Supported (HP platforms only) | Supported (HP platforms only) |



Features/Functionality

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| HP Storage Essentials-Enterprise Edition | Not supported | 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. | Not supported |
| HP Storage Essentials-Performance Edition | Not supported | 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. | Not supported |
| Command View EVA Cluster Failover on a Windows Server | Not supported | Not supported | Not supported |
| Number of HP EVAs supported | 16. (Best practice suggest managing up to 4 EVAs) | 16. (Best practice suggest managing up to 4 EVAs) | 16. (Best practice suggest managing up to 4 EVAs) |
| HP Command View EVA and Command View XP and/or CV XP AE coexistence on same Windows server | Supported | Supported | Supported |
| HP Command View for Tape Libraries and later and HP Command View EVA software coexistence | Supported | Supported | Supported |
| Microsoft Operations Manager support (MOM) | Yes with HP Management Pack for MOM 2005 | Yes with HP Management Pack for MOM 2005 | Yes with HP Management Pack for MOM 2005 |
| Recommended server | HP ProLiant DL145, DL380 G5 DL580 G2 | HP ProLiant DL145, DL380 G5, DL580 G2 | 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) |



Features/Functionality

Supported Browsers for HP Command View EVA

| Operating System | Browser | JRE |
|---|---------------------------------|------------------------|
| This table lists the supported browsers and JRE versions you can use to access HP EVA software from the corresponding cooperating system. A supported JRE is required on the server from which you browse to HP Replication Solutions Manager and from which you run the remote CLUI client | | |
| Microsoft Windows | Internet Explorer 7.0 and later | JRE 1.5.0_06 and later |
| HP-UX PA-RISC | Firefox 1.5 | JRE 1.5.0_05 and later |
| HP-UX Integrity | Firefox 1.5 | JRE 1.5.0_05 and later |
| Linux (x86) | Firefox 2.0 | JRE 1.5.0_06 and later |
| Linux (x64) | Firefox 2.0 | JRE 1.5_06 and later |
| Sun Solaris SPARC (64-bit) | Mozilla 1.7.3 | JRE 1.5.0_06 and later |
| OVMS Alpha | Secure Web Browser 1.7-13 | JRE 1.5.0-1_02+ |
| OVMS Integrity | Secure Web Browser 1.7-13 | JRE 1.5.0-1_01+ |

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 EVA local and remote configuration tasks. For a comprehensive list of supported operating systems for SSSU, please refer to the latest HP 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 layered SAN applications that have been qualified to interoperate with HP Command View EVA v9.3 management software

NOTE: This list represents layered applications that are supported with Command View Server-Based Management deployment only. Refer to the HP Enterprise Virtual Array compatibility matrix for the latest interoperability support matrix for Array Based Management deployments.

NOTE: Refer to the HP Enterprise Virtual Array 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 | HP Replication Solutions Manager |
| | HP Data Protector |
| | HP Application Recovery Manager |
| | HP Configuration Collector |
| | HP Command View for Tape Libraries |
| | HP Command View XP AE |
| | HP Cluster Extension EVA |
| | HP Storage Essentials Enterprise Edition |
| | HP Storage Essentials Performance Edition |
| | HP Navigator |
| | Unified Server and Storage Management Software (Infrastructure) |
| | HP Systems Insight Manager |
| | HP Support Services Software |
| | HP Web-Based Enterprise Services (WEBES)* |
| | HP Remote Support Configuration Collector* |
| | HP Open Service Event Manager* |
| | Instant Support Enterprise Edition (ISEE)* |

* 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.



Supported Platforms and Devices

| | | |
|--|--|-------------------|
| EVA models and controller software supported | EVA3000, EVA 5000 | VCS 3.1, 4.1 |
| | EVA4000, EVA6000, EVA8000, EVA 4100, EVA 6100 and EVA 8100 | XCS 5.1, 6.1, 6.2 |
| | EVA4400 | XCS 9x and above |
| | EVA6400, EVA8400 | XCS9.5 and above |

Distribution Media

| | |
|-------------------|---|
| What's in the Box | HP Command View EVA Software v9.3 RSM v5.2 Media Kit includes 6 CDs with on-line docs, software executables and Installation Instructions. 1 CD Command View EVA Software, SMI-S EVA provider 1 CD HP Storage System Scripting Utility SW 1 CD Command View documentation (see table below for details) 1CD RSM v5.2 Server 1CD RSM v5.2 Host Agents 1CD RSM v5.2 Documentation |
|-------------------|---|

Documentation

- HP Command View EVA Installation Guide
- HP Command View EVA User Guide
- HP Command View EVA online help
- HP Storage System Scripting Utility Reference
- HP EVA Software Compatibility Reference
- HP Command View EVA 9.3 release note

Software Licensing FAQs

| | |
|--|--|
| What is Command View Array-Based Management? | The version of Command View EVA software that now operates on the embedded management module that ships with every EVA4400 |
|--|--|

| | |
|---|--|
| What is Command View Server-Based Management? | The version of Command View EVA software that operates on a general purpose server, a dedicated management server or a HP Proliant Storage Server (NAS). |
|---|--|



Supported Platforms and Devices

What advantages does array-based management provide? Because Command View now runs on the management module embedded in the EVA4400, it reduces the need for a separate management server in most configurations. In addition, it makes available the Fibre Channel and Ethernet switch ports previously used by the management server.

A management server is still required to access certain features not available in a management module configuration. Example features are Continuous Access configuration, and disk drive on-line code load.

The EVA6400 and EVA8400 models of the EVA family need a management server for Command View operations.

What EVA models are supported with array-based Command View? The management module is only available on the EVA 4400 today.

What is the Licensing Methodology for HP Command View EVA v9.3, and how do I get my licenses? Use the Command View EVA v9.3 licensing if you are deploying a new EVA based SAN with at least one new EVA, or you are a direct connect Windows server configuration with at least one new EVA or adding new EVA capacity. In either case, Command View EVA is running on the Windows server to manage EVA. HP Command View EVA v9.3 software licenses are based on terabytes (TB) of raw EVA storage capacity and must be assigned on a per individual EVA basis. Capacity calculation is equal to the raw disk capacity based on binary numbers (1 TB = 1024 GB) of each managed EVA. The License-to-Use (LTUs) for HP Command View EVA is available only in Unlimited capacity. Use per EVA LTU based on the license product number that is purchased. The product comes with CD media, documentation; 1-year 9X5 software support is included in the license to use (LTU) for the base configuration. You are required to select an Unlimited Capacity Use per EVA license based on each EVA model purchased. The single 1 TB licenses may be upgraded at any time with an Upgrade to Unlimited Capacity Use per EVA product number.

When the LTUs are ordered, you will receive a paper End User License Agreement (EULA) with the applicable capacity-based license.

How do the per EVA capacity-based licensing tiers work? HP Command View EVA 9.3 licensing tiers consists of three (3) license tiers for each EVA model. You can use EVA3000 and EVA4000 licenses interchangeably as well as EVA5000 and EVA8000 licenses interchangeably, but EVA6000 licenses are only for the EVA6000, as are EVA 4400 licenses. Unlimited Capacity Use per EVA, or Upgrade to Unlimited Capacity Use per EVA is available. You may always order an Upgrade to Unlimited Capacity Use per EVA later, if desired.

NOTE: Capacity-based Licensing is by controller pair. For example for a 2C1D only order 1 copy of the software media kit and the appropriate LTU. If ordering an 8C8D for example, order 1 copy of the software and order the appropriate capacity LTU required for each EVA controller pair; in this example totaling 4 LTUs.

How do I purchase a license for a new EVA based SAN, and what happens if my capacity is expanded in the base configuration? For example, if your new configuration is comprised of an EVA8400 with 3 TB of capacity, then you need to purchase the Media Kit, and one EVA8400 Unlimited LTU. If you add another EVA8400 into your configuration, you are required to purchase separate LTUs for that specific EVA - again an Unlimited Capacity Use per EVA. Refer to the Model section of this QuickSpec for applicable part numbers.



Service and Support, HP Care Pack, and Warranty Information

Warranty and Services Included with the Product HP warrants only that the Software media will be free of physical defects for a period of ninety (90) days from delivery.

Includes one year of HP software support 9x5 (software technical support and software product and documentation updates).

For more information about HP's Global Limited Warranty and Technical Support, visit ftp://ftp.compaq.com/pub/products/storageworks/warranty/EN_321708-008.pdf.

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 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:



Service and Support, HP Care Pack, and Warranty Information

- 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>

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

Recommended Support **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
- Cost-effectively obtain expert multivendor support
- 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
- Increase revenue-with access to world-class expertise without headcount implications
- Increase customer satisfaction-with no interoperability gaps

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

Recommended Deployment

Product is customer installable

Related HP Care Pack Services that will enhance your HP product experience.

Related 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:

- Enhance operational effectiveness with proactive problem identification and recommendations from HP
- 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



Service and Support, HP Care Pack, and Warranty Information

<http://h20219.www2.hp.com/services/cache/11157-0-0-225-121.html>

HP vDisk/LUN Design and Implementation Service for EVA

For customers who need help designing and implementing a customized EVA storage array configuration:

When you're redeploying an HP disk array, proper LUN or virtual disk configuration can be crucial to the effectiveness of your overall storage environment. HP Vdisk/LUN Design and Implementation Service offers a convenient, cost-effective way to help make sure you get it right the first time.

An HP storage specialist works closely with your IT storage administrator to plan, design, and deploy a virtual disk or LUN configuration customized to deliver the performance, speed, accessibility, and availability your storage environment demands.

<http://h20195.www2.hp.com/v2/GetPDF.aspx/5982-4595ENUS.pdf>

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>.

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. <http://education.hp.com/curr-storsan.htm>

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>



Service and Support, HP Care Pack, and Warranty Information

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>



Configuration Information - Base Configuration

Configuration Information – Base Configuration (New EVA or Direct Connect Deployment and or Adding more EVA Storage Capacity)

Step 1 - Order the HP Command View EVA v9.3, RSM v5.2 Media kit

Select one media and documentation kit PN: per Windows-based management/server used for EVA device management.

NOTE: For new orders of EVA4400, Command View EVA v9.3 media kit is optional, but highly recommended. The Command View EVA software is pre-loaded on the embedded management module of the EVA4400 array. Customers who want to deploy Command View on a general purpose server, or a dedicated management server or on a HP X3000 or X1000 Network Storage System (NAS) need to order a Command View v9.3 media kit.

Also purchase the HP Command View EVA Installation and Startup service (For more information on the installation and startup service see data sheet: 5982-6870EN. Order number: HA114A1-5AS).

| Product Name | Product Number |
|---|----------------|
| HP Command View EVA v9.3, RSM v5.2 Media Kit | T5494F |
| Includes CDs, software, and documentation | |
| HP Command View EVA v9.3, RSM v5.2 E-Media Kit | T5494FAE |
| HP SmartStart EVA Storage Media Kit | T5505G |
| For the EVA 4400, Includes CDs, software, and documentation | |
| HP SmartStart EVA Storage E-Media Kit | T5505GAE |

Step 2 – Determine your EVA model; then select required base configuration License to Use (LTU) per EVA/Controller Pair

Select a required LTU (regular LTU or E-delivery LTU) or combination of LTUs based on your total EVA raw disk capacity (1 TB = 1024 GB) by EVA controller pair; for example a 2C1D requires at least 1 LTU, a 8C8D requires at minimum 1 LTU per EVA controller pair in this case a minimum of 8 LTUs. Select LTU based on the model (EVA 3000, EVA 5000, EVA 4000, EVA 6000, EVA 8000, EVA 4100, EVA 6100, EVA 8100, EVA4400, EVA6400, or EVA8400).

NOTE: LTUs are not interchangeable. Each LTU includes LTU Entitlement Certificate for HP Command View EVA software license with terms and conditions and 1-year 9 x 5 HP Care Pack Services (includes software technical support 9 x 5 and software product and documentation updates).

NOTE: The licensing structure for the EVA4400 does not change when deploying Command View on the embedded management module of the EVA4400. Command View continues to be licensed per the amount of capacity on the array. The Command View license is stored on the array. Users can switch between array-based management and server-based management as needed using the same Command View license.

| Product Name | Product Number |
|---|----------------|
| HP CV EVA 4100 Series Unlimited License | T5175A |
| HP CV EVA 4100 Series Unlimited E-Deliver LTU | T5175AAE |
| HP CV EVA 4400 Unlimited LTU | T5497B |
| HP CV EVA 4400 Unlimited E-Deliver y LTU | T5497BAE |



Configuration Information - Base Configuration

| | |
|--|----------|
| HP CV EVA 4400 Upgrade to Unlimited LTU | T5499B |
| HP CV EVA 4400 Upgrade to Unlimited E-Delivery LTU | T5499BAE |
| HP CV EVA 6100 Unlimited License | T5180A |
| HP CV EVA 6100 Unlimited E-Delivery LTU | T5180AAE |
| HP CV EVA 6400 Unlimited LTU | TA646A |
| HP CV EVA 6400 Unlimited E-Delivery LTU | TA646AAE |
| HP CV EVA 6400 Upgrade to Unlimited LTU | TA647A |
| HP CV EVA 6400 Upgrade to Unlimited E-Delivery LTU | TA647AAE |
| HP CV EVA 8100 Series Unlimited License | T5183A |
| HP CV EVA 8100 Series Unlimited E-Delivery LTU | T5183AAE |
| HP CV EVA 8400 Unlimited LTU | TA649A |
| HP CV EVA 8400 Unlimited E-Delivery LTU | TA649AAE |
| HP CV EVA 8400 Upgrade to Unlimited LTU | TA650A |
| HP CV EVA 8400 Upgrade to Unlimited E-Delivery LTU | TA650AAE |
| HP CV+BC+DCM SW Bundle EVA4400 LTU | TA801A |
| HP CV+BC+DCM SW Bundle EVA4400 E-Delivery LTU | TA801AAE |
| HP CV+BC+DCM SW Bundle EVA6400 LTU | TA802A |
| HP CV+BC+DCM SW Bundle EVA6400 E-Delivery LTU | TA802AAE |
| HP CV+BC+DCM SW Bundle EVA8400 LTU | TA803A |
| HP CV+BC+DCM SW Bundle EVA8400 E-Delivery LTU | TA803AAE |



Configuration Information - Command View EVA Migration Program

Step 3 - Optional Software

Some EVA configurations/quotes will automatically include Storage Essentials Performance Edition SRM software. The Enterprise Edition Media kit and LTU are listed below for reference..

NOTE: Refer to the [HP Storage Essentials Performance Edition Software Quickspecs](http://h18006.www1.hp.com/storage/software/srmgt/std-suite/index.html) for additional information and options.

<http://h18006.www1.hp.com/storage/software/srmgt/std-suite/index.html>

Select one PN: (T3734C) per OpenView Storage Management Appliance.

| Product Name | Product Number |
|---|----------------|
| HP Storage Essentials 6.1 SW Media Media for SEPE software | T4283BA |
| HP Storage Essentials 6.1 SW E-Media Media for SEPE software | T4283BAE |
| HP Storage Essentials Performance Edition 150 LTU 150MAP support for automatic discovery, topology mapping, health monitoring, SAN performance management. 1MAL support for MS Exchange or supported databases. 1 HP EVA disk array support for performance management. | T4661AA |
| HP Storage Essentials Performance Edition 150 LTU E-Media 150MAP support for automatic discovery, topology mapping, health monitoring, SAN performance management. 1MAL support for MS Exchange or supported databases. 1 HP EVA disk array support for performance management. | T4661AAE |



Configuration Information - Upgrading EVA model.

Upgrading an EVA Model and Command View EVA Upgrade LTU:

| | |
|---|----------|
| HP CV EVA 4400 Upgrade to EVA 6400 Unlimited LTU | TA680A |
| HP CV EVA 4400 Upgrade to EVA 6400 Unlimited E-Delivery LTU | TA680AAE |
| HP CV EVA 4400 Upgrade to EVA 8400 Unlimited LTU | TA681A |
| HP CV EVA 4400 Upgrade to EVA 8400 Unlimited E-Delivery LTU | TA681AAE |
| HP CV EVA 6400 Upgrade to EVA 8400 Unlimited LTU | TA682A |
| HP CV EVA 6400 Upgrade to EVA 8400 Unlimited E-Delivery LTU | TA682AAE |

Upgrade Policies

1. Only HP Command View Unlimited LTUs can be upgraded between HP EVA models.
2. For HP EVA's licensed with one or more HP Command View 1TB LTU's, they must first be upgraded to an Unlimited LTU prior to upgrading between EVA models. See above chart for Upgrade to Unlimited LTU part numbers.
3. HP Command View LTUs are non-transferable from one EVA to another. All HP EVA model upgrades require a new HP Command View LTU.
4. Upgrade licenses can be considered for data in place upgrades only.
5. All licenses are available for either E-Delivery or as regular paper licenses.

NOTE: EVA 4k series refers to both EVA 4000 and EVA 4100, but not the EVA 4400

EVA 6k series refers to both EVA 6000 and EVA 6100, but not the EVA6400

EVA 8k series refers to both EVA 8000 and EVA 8100, but not the EVA8400

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 Command View EVA Software Suite:

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

HP Storage Management Pack for Microsoft MOM 2005:

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

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

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