

# HP StorageWorks Enterprise Virtual Array (EVA) software

Data sheet



HP StorageWorks EVA storage software and disaster-tolerant solutions help enable high availability for your mission-critical environments. You can rest easy knowing that HP software solutions protect your application data while ensuring high system availability. These solutions integrate into your applications and servers to help simplify storage management activities, improve capacity utilization, automate backups and data protection, and better utilize your IT staff and resources.

## Storage device management software

### HP StorageWorks Command View EVA

HP StorageWorks Command View EVA software is a comprehensive software suite designed to simplify array management and provisioning for the high-performance HP StorageWorks Enterprise Virtual Array (EVA) family of storage array products. Command View EVA software proactively manages EVAs with a variety of networked storage devices across distributed storage area networks (SANs). Combined with HP Systems Insight Manager that ships with each EVA, Command View EVA software provides enterprises with the industry's most comprehensive unified storage and server management solution for both managing and monitoring EVAs.

Command View EVA software offers storage administrators a powerfully simple, single storage management solution for all of their EVA management needs. It automates and aggregates storage management to reduce complexity and increase productivity. Growing capacity is simple; an administrator can easily and dynamically expand logical unit numbers (LUNs) and add physical drives online to quickly meet changing business needs without application downtime. Performance monitoring provides real-time analysis and collection of historical performance data—allowing administrators to identify bottlenecks and keep applications running at enhanced levels. For mission-critical applications, take advantage of proactive remote services by integrating with the HP Instant Support Enterprise Edition and HP Solutions Center support to enable 24x7 uptime.

### Features and benefits

- **Simplicity:** Reduce IT costs and management complexity with simplified EVA management by automating and aggregating array storage with fewer administrative steps and items to manage; easily and dynamically expand LUNs online; and instantly configure LUNs and RAID groups with just a few keystrokes.
- **Comprehensive scripting:** Reduce training and simplify repetitive tasks with HP Storage System Scripting Utility (SSSU) software, a powerful scripting utility that ships with Command View EVA. The SSSU provides a host-to-array communications bridge for documenting and automating EVA local and remote configuration tasks.



- Flexible connectivity with expanded multi-SAN discovery:** Increase value and protect investments with Fibre Channel and iSCSI connectivity; expand multi-SAN device discovery across up to 6 SANs; reduce the number of management servers required to manage the EVA while significantly lowering management costs.
- Agility:** Quickly configure and provision storage and instantly replicate data; instantly provision logical virtual disks from the available pool of storage—adding the right amount of capacity to meet changing business demand; easily and efficiently create snapshots and quickly create remote mirrors for fast data replication, all without compromising downtime.
- Enhanced asynchronous replication and MirrorClone support:** Increase support for long-distance replication with enhanced asynchronous replication; create a full, byte-for-byte, point-in-time copy of a source LUN with MirrorClone, which tracks all changed blocks and can re-sync with the original LUN.
- Proactive remote support and 24x7 event management:** Immediately identify and map EVA events with HP Instant Support Enterprise Edition; enable maximum EVA availability and health through proactive, continual automatic discovery and notification of events 24x7 to the HP Solutions Center.
- Comprehensive performance-monitoring software to help reduce performance bottlenecks:** Analyze a variety of EVA performance metrics such as host connection, port status, and physical disks; view read and write histograms, virtual disks, and replication metrics with HP StorageWorks Command View EVAPerf software; graph them using Windows® PerfMon to quickly identify performance bottlenecks.
- Industry-leading security features:** Attain two levels of access—administrator (read/write) and user (read only)—by integrating Command View EVA with Windows Active Directory; take advantage of audit logging of user actions and events that change the state of the system, as well as single sign-on from HP Systems Insight Manager.
- LUN security for protection against unauthorized storage access:** Protect against unauthorized access to specific volumes (LUNs); eliminate the need to use precious host cycles to constantly monitor authorization thanks to LUN security, which is totally transparent to the servers, operating systems, and applications.
- Simplified end-to-end SAN management:** See the big SAN picture with HP Storage Essentials storage resource management (SRM) software, now available with EVA; reduce SAN complexity with automated complex and manual tasks, and automatically discover and visually display all the physical components in an easy topology view.

# Adaptive provisioning

## HP StorageWorks EVA Dynamic Capacity Management software

HP StorageWorks EVA Dynamic Capacity Management software provides a comprehensive solution that automates storage provisioning and improves capacity utilization for the HP StorageWorks Enterprise Virtual Array (EVA) family. Designed for the enterprise market, HP EVA Dynamic Capacity (DC) Management software uses advanced automation to automatically “right-size” the supported file system and the EVA virtual disk (Vdisk) storage volume to the needs of an application. This action dramatically improves capacity utilization by allowing administrators to simply specify a capacity utilization range for each Vdisk. In some cases, 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%–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 it also may allow administrators to postpone purchasing additional capacity when storage utilization increases. These benefits also help reduce the operational costs of powering and cooling unnecessary storage while helping the environment by lowering the enterprise’s carbon footprint.

### Features and benefits

- **Automated provisioning for increased storage utilization:** Automatically expand file systems and storage volumes online as application needs increase, or shrink to reclaim unused capacity that you can return to the disk group for use by other applications.
- **Simple and quick setup and configuration:** Configure or change policies across multiple volumes in just seconds. Once they are set, capacity provisioning and reclamation are automatic, allowing administrators to focus on other business-critical tasks.
- **Lowered capital and operational expenses:** Reduce the need to purchase additional storage capacity and software licenses with higher capacity-utilization rates. In addition, higher utilization results in lowered power and cooling requirements by reducing the number of disk drives required.

- **Accelerated storage consolidation:** Deploy more applications on the same storage array with improved capacity utilization.
- **Management flexibility for greater control:** Easily switch between automatic and manual modes to quickly adapt to changing business needs via a flexible architecture.
- **Protection of valuable data:** Protect valuable data by integrating host and storage operations during expand and shrink cycles.

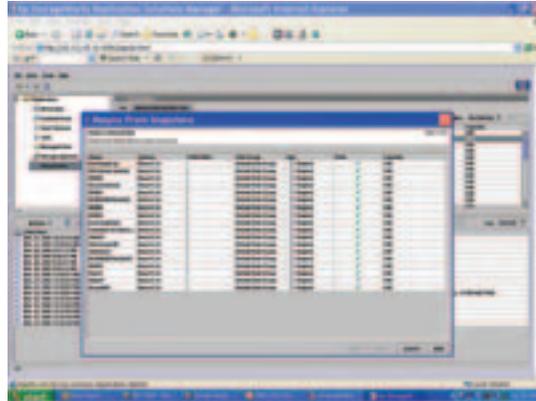
# Storage replication software

## HP StorageWorks Business Copy EVA Software

HP StorageWorks Business Copy EVA software is an array-based application solution for the EVA family that uses a simple graphical user interface (GUI) to create, manage, and configure local replication for EVA storage arrays. Business Copy EVA software shares an integrated management interface, Replication Solutions Manager (RSM), with HP StorageWorks Continuous Access EVA software. With a combination of traditional Snapshot, advanced Snapclone, and space-efficient Vsnap replication technologies, HP Business Copy EVA helps enable enterprise business continuity. The management GUI, Replication Solutions Manager, integrates remote replication capabilities found in Continuous Access EVA software across the full EVA family.

### Features and benefits

- **Simple management and configurability:** Quickly configure and manage local replication with up to 7x less effort with an advanced management interface.
- **Tight application integration:** Rapidly restore a Microsoft® Exchange or SQL database with an HP Application Recovery Manager solution.
- **Advanced replication technologies:** Provide fast, non-disruptive point-in-time data copies with Vsnap, Snapclone, and MirrorClone; simply assign disk group and RAID to match protection levels to business value; improve application availability through non-disruptive restore of online volumes.



- **Flexibility and versatility:** Improve operations by allowing extended access to non-disruptive, read/writable copies of production data to other users and servers.
- **Ability to quickly restore online volumes:** Quickly recover a corrupted Vdisk.
- **Instant Snapclones and Vsnap:** Gain immediate access to clones with the unique ability of Snapclones. Vsnap are true, space-efficient Snapshots that allocate space as needed. Both technologies provide optimal use of storage capacity.
- **Cost-effective business continuity:** Accelerate return on investment and protect applications through advanced replication technologies that use storage capacity wisely.
- **HP Replication Solutions Manager security:** This flexible security model allows simplified, role-based operating system authentication and user administration with audit capabilities.
- **Replica protection level matched to business need:** Create a Vsnap or Snapshot of a source and choose to keep it at the same RAID level; choose a different RAID and place it in a different disk group based on business needs; present Snapclones to different disk groups including FATA.
- **MirrorClone with fast re-sync:** Create an instantaneous byte-for-byte clone that maintains its relationship with the source volume, accelerating the re-sync time.

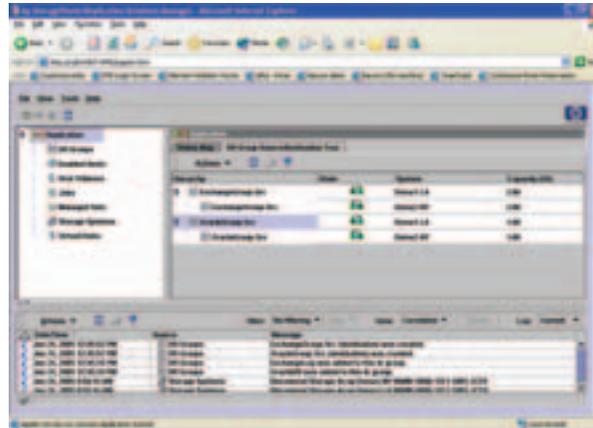
## HP StorageWorks Continuous Access EVA

HP StorageWorks Continuous Access EVA software, an array-based application, uses a powerfully simple GUI to create, manage, and configure remote replication on the entire EVA product family. Continuous Access EVA shares an integrated management interface, called Replication Solutions Manager (RSM), with HP StorageWorks Business Copy EVA—offering a unique, unified replication management approach. RSM manages all local and remote replication features across the full EVA array storage family. With the combination of unique remote replication technologies and the unparalleled easy-to-use RSM interface, organizations can protect information in the event of a disaster.

Furthermore, Continuous Access EVA provides the necessary components to solve mission-critical business continuity objectives in a cost-effective and easily deployable package. It helps enterprises achieve competitive advantage by combining disaster-tolerant solutions and managed services into their planning and daily routines, helping to ensure data security, availability, and integrity.

### Features and benefits

- **Advanced disaster recovery:** Comply with business continuity and regulatory goals; protect information from disaster or unplanned downtime with advanced replication technologies.



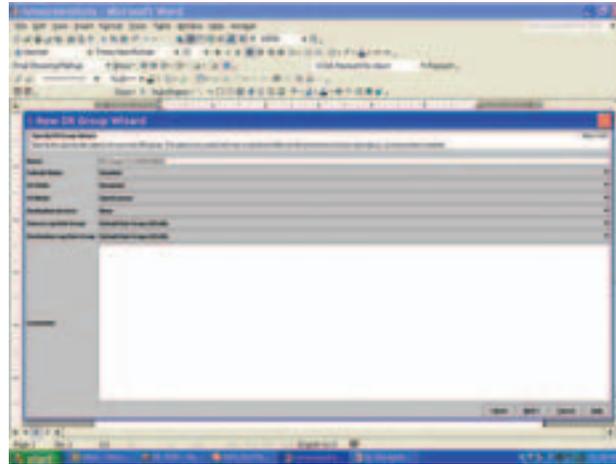
- **Simple to manage and configure:** Continuous Access EVA shares the HP Replication Solutions Manager with HP Business Copy EVA; this interface offers a simple control point that utilizes job engines, wizards, and host integration; reduce workload and errors with an Interactive Topology Manager.
- **Flexibility and versatility:** Take advantage of a single management interface that supports the full EVA product family and integrates with HP Business Copy EVA.
- **Synchronous and asynchronous modes of replication:** Experience flexibility in recovery time and recovery point objective planning with two replication modes of data transfer—synchronous and asynchronous.
- **Three-site cascaded replication wizard:** Quickly configure and manage three-site cascaded replication to meet business and regulatory requirements using the new Replication Solutions Manager GUI.
- **HP Replication Solutions Manager Security:** Allow simplified, role-based operating system authentication and user administration using a flexible security model with audit capabilities.
- **Cluster Extension (CLX), Metrocluster (MC), and Continentalclusters (CC) support:** Leverage fully automatic failover/failback of storage and servers.

## Quick recovery solutions

### HP Application Recovery Manager software

HP Application Recovery Manager (AppRM) software is a recovery solution for business application data designed to improve the efficiency of your IT resources. Automate restoration of application databases such as Exchange and Microsoft SQL in the event of failure or corruption, and restore data to the moment before an outage. AppRM, powered by Data Protector software technology, delivers a standalone solution to augment your existing backup software strategy by delivering application integrated data recovery.

In Windows 2003 environments, Volume Shadow Copy Service (VSS) provides the means to create online point-in-time copies of open files from a file server or backup application, or within Exchange or Microsoft SQL application environments. Application Recovery Manager software integrates with VSS to make non-disruptive point-in-time copies of databases for recovery in minutes, not hours as required by traditional recovery from tape. A single AppRM deployment supports Microsoft-compliant quick recovery using the VSS framework for Exchange and Microsoft SQL with HP EVA disk arrays. If your Microsoft SQL database is embedded in an SAP ecosystem, then AppRM enhances the backup and recovery experience by reducing the impact of SAP application operations.



## Features and benefits

- **Recovery in minutes:** Improves application availability by creating volume shadow copies of application databases while the application is still running; experience data recovery in minutes rather than hours, as in traditional recovery from tape, with recovery-ready copies stored within the disk array
- **Disk-to-disk reliability:** Access an array-based (disk-to-disk) solution for an accelerated, more reliable recovery process; obtain data-consistent, zero-downtime, point-in-time copies with database integrity check to detect potential errors or corruption.
- **Pinpoint restoration:** Create point-in-time copies of application databases and allow recovery via the log file beyond the time of the last shadow copy; restore to a recovery point objective of zero (RPO= 0) or stop short of any corruption.
- **Operational efficiency:** Offload I/O from the recovery server to accelerate time-to-recovery.
- **Administrative efficiency:** Remove the need for separate storage and business application administrators, providing a common interface that serves multiple business applications and automated processes—making management simple.
- **Financial efficiency:** Augment pre-existing backup software, thus removing the need to change your backup strategy to add instant recovery capability; HP protects your investment by leveraging the value of an established strategy.

- **Environmental efficiency:** Establish a foundation for feature enhancements and added platform support.
- **Simple deployment model:** Access single deployment for recovery of leading business applications (Exchange, SQL, and SAP environments utilizing SQL).
- **Microsoft-compliant solution:** Take advantage of Microsoft-compliant quick recovery (utilizing the VDS/VSS framework) for Exchange and SQL with HP EVA disk arrays.
- **SAP implementation:** Reduce the impact of SAP application operations; experience 24x7 global operations with order management, shipment, and other processes continuing during backup.

## Disaster-tolerance solutions

System downtime can mean lost productivity, lost revenue, lost customers, and lost opportunities. HP offers business continuance solutions that protect your valuable information against the threat of downtime—whether planned or unplanned—making your operations more resilient. HP business continuity software solutions include disaster tolerance locally and remotely to keep corporate information available.

# HP offers solutions that protect your valuable information against the threat of downtime—whether planned or unplanned—making your operations resilient, regardless of external or internal events.

Our proven strategies, services, and technologies can reduce your exposure and vulnerability. Defend your operations against downtime threats and ease your recoveries with HP business continuance software solutions:

- HP Metrocluster with HP StorageWorks Continuous Access EVA
- HP Continentalclusters
- HP StorageWorks Cluster Extension EVA (CLX EVA)

HP Metrocluster with Continuous Access EVA, HP Continentalclusters, and HP StorageWorks Cluster Extension EVA offer high levels of protection and disaster tolerance for enterprise, tiered-enterprise, and midrange storage environments. These solutions enable integration of extended high-availability server clustering with HP remote mirroring technologies. This strategy reduces downtime and provides rapid site recovery with automatic failover of application services, automatic data consistency checking, and read/write enabling of remotely mirrored storage.

## Key features

- **“Hands-free” disaster tolerance:** Reduce the complexity involved in a disaster-recovery situation with automated failover and failback; help protect against the risks of downtime and carry out automated decision-making if needed.
- **Protection against data loss:** Increase availability via rapid site recovery with automatic data consistency checking and read/write enabling of remotely mirrored storage

## HP Services

HP Services has end-to-end, industry-leading expertise in delivering solutions that help you improve your business agility. From initial assessment and design to technical integration and ongoing support, HP Services can be your single point of contact and accountability.

### HP EVA-related services:

- HP Data Replication Solution Service for Continuous Access (CA) EVA Implementation—provides implementation and verification of the Continuous Access feature of the EVA storage array. The service is offered at three service levels—ranging from basic installation to more comprehensive implementation—that can be tailored to meet the specific needs of your storage environment.
- HP Disaster Tolerant Management Services for CA EVA are designed and engineered in the HP Disaster Tolerant Solution Center to increase the effectiveness of the CA EVA disaster-tolerant capability. This unique package of integrated services is available for in-sourced or out-sourced solutions—and it addresses the key issues related to the daily operation of your customer’s environment, including storage, server and network monitoring, and fast recoveries during a wide range of failure conditions.
- Other applicable HP storage services include:
  - Backup and Recovery Solution Service
  - Electronic Vaulting for Enterprises
  - Storage Essentials Solution Service
  - HP SAN Implementation Service
  - HP Data Migration Service
  - HP Performance Analysis Service for XP/EVA Arrays
- HP Care Pack services—a comprehensive portfolio of services for maintaining the highest levels of IT availability:
  - Critical Service
  - Proactive 24 service
  - Support Plus 24 service
- Instant Support Enterprise Edition (ISEE)—remote monitoring and support solution for your servers, storage, and networks
- Business Continuity and Availability Services—protect and reduce disruption to IT infrastructure and associated business processes against site outages, disasters, and environmental events.

For further details, contact your HP sales representative or visit: [www.hp.com/hps/storage](http://www.hp.com/hps/storage).

- **Complete data center failover:** Integration with Continuous Access EVA and OS cluster service:
  - HP Metrocluster with Continuous Access EVA and Continentalclusters support HP-UX on EVA and XP.
  - HP StorageWorks Cluster Extension EVA supports Windows on EVA and supports Windows, Linux, Solaris, and AIX on XP.

## HP Services

### Warranty services

HP StorageWorks EVA software solutions include one year of HP Software Support 24x7 (software technical support and software product and documentation updates). HP warrants only that the software media will be free of physical defects for a period of ninety (90) days from delivery. For more information about HP Global Limited Warranty and Technical Support, visit: [www.hp.com/products/storageworks/warranty](http://www.hp.com/products/storageworks/warranty)

### HP Care Pack services

HP Care Pack services are scalable, flexible, and reliable—like your storage. With HP Care Pack services, you can enhance technology operations, minimize risk, and drive business outcomes with easy-to-buy, easy-to-use scalable support packages for servers, storage, networking, desktops, mobile computing, printing and imaging, and software. These services help you make the most of your hardware and software investments. They extend your standard product warranty and let you choose the support levels that meet your business requirements—from basic to mission-critical—while helping you contain total cost of ownership. To cost-effectively upgrade or extend your warranty, you can purchase the HP Care Pack warranty extension along with HP products. For many products, post-warranty HP Care Pack services are available when your original warranty has expired. For more information on Storage Care Pack services, visit: [www.hp.com/services/storage\\_carepacks](http://www.hp.com/services/storage_carepacks)

## Additional HP support services

HP Services provides a broad spectrum of services to commercial and enterprise customers, including performance and availability services such as proactive mission-critical services. HP also offers support management services for deployment of the entire IT infrastructure, including HP and multivendor environments. For more information on these additional HP support services, visit [www.hp.com/hps/storage](http://www.hp.com/hps/storage).

### Proactive and remote support services

As your information technology environment becomes closely aligned with your business strategies, optimizing your IT infrastructure investments and improving overall system availability and utilization become central to your success in the marketplace. HP Services provides a full spectrum of Web-based resources that deliver efficient problem-solving and fast answers. We offer tools to help you manage product lifecycles and furnish remote monitoring and support solutions for your servers, storage devices, and networks—in addition to proactive and preventive tools to help you manage your IT environment.

### Financial services

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage, and ultimately retire your HP solutions.

For more information on Financial Services, visit [www.hp.com/go/hpfinancialservices](http://www.hp.com/go/hpfinancialservices).

© Copyright 2007, 2008 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation.

For more information visit, [www.hp.com/go/storageworks/software](http://www.hp.com/go/storageworks/software)

5983-0604EN Rev. 3, February 2008

