

### Overview

The industry award winning HP Storage Essentials Storage Resource Management Software is the first unified, open, and standards-based suite of SRM products designed to integrate with HP's unified infrastructure management platform, HP Systems Insight Manager. HP Storage Essentials SRM Suite helps midsize businesses with mid-market storage budgets and lean IT staff unify the management of their server and storage infrastructure, optimize the planning and execution of change and automate IT service and asset management. HP Storage Essentials SRM Standard Edition Software simplifies the big picture by reducing SAN complexity, lowering SAN management costs while improving the efficiency of IT staff for Microsoft Windows and Linux servers and smaller HP storage focused SANs including HP disk arrays, HP NAS, HP Tape, and fabric devices. The HP Standard Edition SRM software unified server and storage tool-set automates storage processes and tasks with automatic device discovery, visualization and topology mapping for quick device identification. The software takes advantage of the latest industry standards such as SMI-S, WBEM, WMI, JBoss and J2EE to ensure our solution is extensible, interoperable and will support the insertion of third party partner technology content. The HP Standard Edition SRM solution integrates with a rich assortment of HP software including Systems Insight Manager, HP Essentials, and HP Storage Essentials Enterprise Edition software and its advanced software plug-ins to reduce the time and money associated with deploying and managing storage infrastructure.

HP Standard Edition SRM software is an affordable SRM solution that optimizes SAN capacity, increases IT staff efficiency and simplifies end-to-end troubleshooting and reporting while improving availability and SAN performance. From a single, Web-based, enterprise console you can configure your storage environment and monitor file system utilization to reclaim wasted space and ensure file server availability. You can obtain a holistic view of storage from an application level with Oracle database, Microsoft SQL Server, Sybase database, Microsoft Exchange Server and now InterSystems Cache' for fast problem resolution. Centralized event management and now with end-to-end performance management for HP EVA with historical and future trending brings additional benefits too. With one interface you can manage SAN and NAS storage, and with the optional SRM Backup Manager Software you can monitor status of the entire backup process, visualize the backup configuration and recoverability and view the physical infrastructure supporting the backup. The Standard Edition SRM solution simplifies ordering by including media, licensing and HP Installation and Start up Service to ensure the best total customer experience. As midsize business grows, you can take advantage of an easy upgrade/migration path to enterprise, with scaleable, integrated Storage Essentials SRM Suite solutions.

The following Value add HP Storage Essentials SRM Suite Software plug-ins are available for SRM Standard Edition.

- **HP Storage Essentials SRM Database Viewer Software:** Monitors the capacity and performance of Oracle, Sybase, Microsoft SQL and Cache' databases. For example, in an Oracle database you can monitor instances and table spaces, and traces Oracle application paths through the underlying SAN infrastructure, enabling you to anticipate and pinpoint the root causes of capacity, performance, and availability problems. The Database Viewer software extends HP Storage Essentials SRM Enterprise Edition with application-to-spindle infrastructure dependencies for your database environment. With its powerful capacity, performance, fault management and filtered topology views - database infrastructure dependency management is simplified thereby allowing IT with enterprise databases to meet availability and performance objectives.
- **HP Storage Essentials SRM Exchange Viewer Software:** Monitors the capacity and performance of Microsoft Exchange Server instances, storage groups, and folders, and traces Exchange Server application paths through the underlying SAN infrastructure, enabling you to anticipate and pinpoint the root causes of capacity, performance, and availability problems.
- **HP Storage Essentials SRM File System Viewer Software** Provides high performance, highly scalable file-level scanning, analysis, reporting, and policy-based management capabilities to reclaim wasted disk space, respond faster to file server out-of-space conditions, and classify unstructured data in support of Information Lifecycle Management (ILM) initiatives. Whether your file servers are hosted on network attached storage (NAS) or storage area networks (SAN), the File System Viewer provides the file system scanning, analysis, and reporting features you need to reclaim wasted disk space, ensure file server availability, monitor user consumption, and classify unstructured data for ILM initiatives.
- **HP Storage Essentials SRM NAS Manager Software:** Provides comprehensive Network Attached Storage (NAS) management capabilities for HP ProLiant Storage Server network storage solutions. Visualize your distributed HP NAS solutions and centrally manage their capacity, performance, events, and dependencies to ensure NAS availability and performance and unify SAN and NAS management. The software supports an extensive range of NAS discovery, topology, reporting, and management capabilities for NAS environments. Why manage NAS and SAN infrastructure independently. This plug-in will allow you to integrate your entire NAS and SAN infrastructure. Better understand the impact of configuration changes and file sharing

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activities and improve storage utilization, availability and root cause performance analysis on your NAS infrastructure.

### Optional Storage Essentials SRM Suite Software plug-in available for SRM Standard Edition.

- **HP Storage Essentials SRM Backup Manager Software:** Extends HP Storage Essentials SMR Suite with powerful Backup resource management and reporting, ensuring health and performance of your data protection infrastructure. Report on statistics such as: backup resources, success/failure, SLAs, backup volume, job size, and client history. MAPs backup dependencies on SAN resources and extends topology to tape libraries, tape drives, and backup servers. You can also monitor drive performance. Supports HP Data Protector and Veritas Netback up applications.
- **HP Storage Essentials SRM Standard Edition to SRM Enterprise Edition Upgrade:** Provides an easy upgrade/migration path for SRM Standard Edition customers who desire enterprise heterogeneous management with scalability in large storage environments when business outcomes change.

### NOTES:

1. Storage Essentials SRM Advanced plug-in software is the same software products and licensing for Storage Essentials SRM Enterprise Edition Software and Storage Essentials SRM Standard Edition Software. This provides consistency across the portfolio and simplifies training.
2. HP Storage Essentials SRM Standard Edition to SRM Enterprise Edition Upgrade is not customer installable and requires the Level 3 HP Implementation service.

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## What's New

Storage Essentials Support for:

- HP Enterprise Virtual Array (EVA) end-to-end performance management with new HP Storage Essentials SRM Performance Pack Software
- Easy migration/upgrade path from mid-market to enterprise heterogeneous server, storage and infrastructure management via unified interface
- Automatically discover, display, monitor host clusters for Microsoft Cluster Server (Windows)
- Storage Essentials SRM Host Builder Wizard – lets you customize and manually create/edit cluster relationships and build a clustered host and define nodes within the cluster
- Visualize, monitor and report on Microsoft Exchange Virtual Server
- Visualize, manage and report on Oracle Real Application Clusters (RAC)
- InterSystems Cache' database included in Database Viewer Software
- SRM Backup Manager enhancements – provides drive and library utilization reporting, running job monitor, granularity in backup updates,
- SRM File System Viewer rule wizard – lets you define reports based on file attributes, e.g. show MP3 files in a folder named "Finance"
- Enhanced Microsoft Exchange user mailbox and folder management – shows storage usage and topology of the individual user mailboxes and public folders
- Increased Interoperability (new hardware e.g. OS, applications, switches, etc)
- Install Wizard – simplifies and intuitively guides you through the install

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### Models

Product name	Product description	Product number	E-Delivery product number (E-Media and E-LTUs)
HP Storage Essentials SRM Standard Edition Media Kit and E-Media Kit	Media Kit (CDs-and DVD) Media Kit and documentation in electronic form, EULA and E-Media Kit  Electronic download (-Media Kit - E-Delivery)	T5314AA	T5314AAE
HP Storage Essentials SRM Standard Edition LTU	Combined LTU document, 1 LTU supports 150 MAPs, 4TBs SRM File system Viewer, 4TBs of SRM NAS Manager and 1 MAL only of either SRM Exchange or SRM Database Viewer, SRM Performance Pack up to 3 HP EVAs, 1 Password request document  E-LTU - E-Delivery	T5315AA	T5315AAE

### Storage Essentials SRM Standard Edition Software Value-Add Plug-ins for Additional Purchase

Product name	Product description	Product number	E-Delivery product number (E-Media and E-LTUs)
HP Storage Essentials SRM Exchange Viewer 1 MAL LTU	Microsoft Exchange path rendering from database, storage groups through disk subsystem.	T4288AA	T4288AAE
HP Storage Essentials SRM Exchange Viewer 1 MAL Tier-2 LTU	Microsoft Exchange path rendering from database, storage groups through disk subsystem.  <b>NOTE:</b> (Use this part number for quantity purchases greater than 20 MALs only)	T4288AG	T4288AGE
HP Storage Essentials SRM Database Viewer 1 MAL LTU	Storage Essentials SRM Database Viewer 1 MAL LTU or E-LTU (supports Oracle database, Sybase database and Microsoft SQL)	T4289AA	T4289AAE
HP Storage Essentials SRM Database Viewer 1 MAL Tier-2 LTU	Oracle table spaces & database, host through spindle rendering as well as support for Microsoft SQL Server, Sybase database and InterSystems Cache ' - a consolidated database viewer.  <b>NOTE:</b> (Use this part number for quantity purchases greater than 20 MALs only)	T4289AG	T4289AGE
HP Storage Essentials SRM File System Viewer 1TB LTU	High performance, highly scaleable file-level scanning, analysis, reporting, and policy-based management capabilities to reclaim wasted disk space.	T4292AA	T4292AAE
HP Storage Essentials SRM File System Viewer 1TB Tier-2 LTU	High performance, highly scaleable file-level scanning, analysis, reporting, and policy-based management capabilities to reclaim wasted disk space.  <b>NOTE:</b> (Use this part number for quantity purchases greater than 20 TBs only)	T4292AG	T4292AGE

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HP Storage Essentials SRM NAS Manager 1TB LTU	Visualize HP NAS and NetAPP NAS and SUN StorEdge NAS network storage solutions. Big picture topology view, centrally manage capacity, performance, event and dependencies to ensure NAS availability and performance.	T4294AA	T4294AAE
HP Storage Essentials SRM NAS Manager 1TB Tier-2 LTU	Visualize HP NAS and NetAPP NAS and SUN StorEdge NAS network storage solutions. Big picture topology view, centrally manage capacity, performance, event and dependencies to ensure NAS availability and performance.	T4294AG	T4294AGE
<b>NOTE:</b> (Use this part number for quantity purchases greater than 20 TBs only)			
HP Storage Essentials SRM Backup Manager 1TB LTU	Monitor and visualize the entire backup, backup resource management, end-to-end path dependency, reporting, device health and performance of backup and infrastructure. Supports HP Data Protector and Symantec NetBackup.	T4295AA	T4295AAE
HP Storage Essentials SRM Backup Manager 1TB tier-2 LTU	Monitor and visualize the entire backup, backup resource management, end-to-end path dependency, reporting, device health and performance of backup and infrastructure. Supports HP Data Protector and Symantec NetBackup.	T4295AG	T4295AGE
<b>NOTE:</b> (Use this part number for quantity purchases greater than 20 TBs only)			
HP Storage Essentials SRM LTU upgrade to SRM Enterprise Edition Software with all Standard Edition to SRM Enterprise Edition Upgrade LTU	privileges to heterogeneous and other advanced Storage Essentials SRM Software	T5316AA	T5316AAE

### NOTES:

- Level 1 HP Installation and Startup Service is required for SRM Standard Edition Software and Level 3 HP Implementation Service is required for HP SRM Standard Edition to SRM Edition SRM Upgrade.
- You can only use Storage Essentials SRM Tier 2 for quantity orders only. The product numbers are designated by a "G" for example T4294AG. The minimum quantity purchase for the number of MALs (20), and/or TBs (20).
- You cannot combine Storage Essentials SRM Suite Tier 1 quantities to achieve Tier 2 quantity results. For example, you need 5 TBs of SRM NAS Manager T4294AA now, but in six months an additional 15 TBs are required. In the first case, you would order quantity (5) T4294AA, and six months later you would order another (15) T4294AA. Or you could order (20) T4294AG upfront to take advantage of Tier 2 quantity benefits for 20 TBs for pre-determined growth.

### Storage Essentials License Definitions:

- MAP = managed access port
- MAL = managed application license
- User = Number of User's (User licensing not available on Standard Edition SRM Software)
- TB = Terabytes (Physical Capacity)
- 1 Array LTU – used for SRM Performance Pack with SRM Enterprise Edition only (HP EVA support only)

### MAP License Definition

#### Interconnect devices:



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- For a fully populated switch (i.e., all blades are installed and all ports in all blades have GBIC/SFPs installed), all ports are counted towards MAPs total. Otherwise, add up the number of GBIC/SFPs installed in the FC switch and that is the MAPs count.

### Hosts:

- A non-SAN attached server (no HBA) that has the agent installed/discovered will count as 1 MAP
- A SAN attached server that has the agent installed/discovered will count each FC port as a MAP (so, a dual ported HBA will count as 2 MAPs)
- IDE or SCSI ports are not counted in MAP calculations unless they are used to connect to fabric switches or storage systems
- A Windows server with no CIM Extension installed, but that has been discovered via WMI will count as 1 MAP

### Storage subsystems:

- All discovered storage array controller ports count (for example SMI-S is used to find the arrays). If the array has 8 ports, it will count 8 MAPs. The number of MAPs in a storage system includes all physical connections independent of protocol (including Fibre Channel, ESCON, SCSI and/or FICON, Ethernet, or Gigabyte Ethernet).  
**NOTE:** For HP Standard Edition SRM software, the total MAP count cannot exceed 150 MAPs. If configurations require greater than 150 MAPs then Storage Essentials SRM Enterprise Edition SRM Software is probably a better fit. To increase the MAP licensing count, you must upgrade to the Storage Essentials SRM Standard Edition to Enterprise Upgrade LTU (T5316AA or AAE)

### MAL License Definition

- Each licensed copy/SID of the application being managed
- Named users, processor counts, or client access licenses do not increase the number of MALs  
**NOTE:** The Oracle Database Viewer Plug-in has been consolidated to a single viewer, which supports Oracle, Sybase, MS SQL and InterSystems Cache`. To accomplish this, the SRM Oracle Viewer product number T4289AA was renamed to Storage Essentials SRM Database Viewer, and it will maintain the same part number T4289AA. T4289AA now supports Oracle, Sybase, MS SQL and Cache`. If you previously purchased SRM Sybase Viewer and SMR MS SQL Viewer and need additional licensing, order T4289AA for 1 MAL in the quantities sufficient to meet need.

### The following Storage Essentials SRM application viewer products are licensed by MALs

- SRM Exchange Viewer
- SRM Database Viewer (Oracle database Sybase database, Microsoft SQL and InterSystems Cache' support)

### TB License Definition (1GB = 1024kbytes; 1TB equals 1024GB)

#### For SRM File System Viewer

- Total aggregated capacity, excluding raw volumes but including all clustered servers, of all file systems managed  
For SRM NAS Manager
- Raw terabytes managed

#### For SRM Backup Manager

- Licensing is based on the maximum number of TBs backed up in a 1-day period including partial, incremental, and full backups for Veritas NetBackup or HP Data Protector. At the start of the SRM Backup Manager application, the software totals the backup volume for the last 30 days, and calculates the 30 day average daily backup volume. If the calculated monthly value is greater than what is licensed, the software provides a in or out of compliance message.  
**NOTE:** This is a change from the previous SMR Backup Manager licensing which, at startup of the application, Backup Manager, totals the backup size for the last 30 days, and if the monthly total is greater than the licensed value SRM Backup Manager., gives a warning. Licensing was based on total capacity backed up in 30 days. The new licensing is based on total

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backed up capacity in one day.

#### SRM Backup Manager ordering example:

- A customer has a 10TB Database and performs a full backup on a daily basis. The total 1-day backed up capacity is 10TBs. In this example, the customer would need to order quantity (10) T4295AA 1TB LTU. However this order assumes database growth is static. To accommodate future capacity growth and reduce the risk of being out of licensing compliance. This customer agreed to a growth factor of 50% to cover incremental capacity growth. The readjusted order now is quantity (15) T4295AA and provides headroom for future capacity growth.

#### SRM Standard Edition License to use (LTU) Ordering Rules:

- SRM Standard Edition Software is licensed for 150 MAPs maximum, you cannot increase MAP LTU licensing beyond 150 MAPs. To exceed 150 MAPs, you can order the Storage Essentials SRM Standard Edition to SRM Enterprise Edition upgrade T5316AA or T5316AAE.
- The SRM Standard Edition LTU includes: 150 MAPs, 4TBs File System Viewer, 4TBs NAS Manager, and 1 MAL of either SRM Database Viewer or SRM Exchange Viewer, and SRM Performance Pack up to 3 HP EVA. Additional Value-Add and Advanced plug-ins may be purchased as needed.
- The following Storage Essentials SRM Enterprise Edition Software plug-ins are available to SRM Standard Edition as well as SRM Enterprise Edition: SRM Exchange Viewer, SRM Database Viewer, SRM NAS Manager, SRM File System Viewer and the optional SRM Backup Manager plug-in. There are no LTU quantity restrictions; and you can purchase as many LTU as needed to accommodate requirements for storage growth.
- To purchase HP SRM Standard Edition Software, order:
  - One T5314AA or T5314AAE (Media or E-Media Kit)
  - One T5315AA or T5315AAE LTU or E-LTU. In addition, you will need to order applicable HP Installation and Start UP and or HP Care Pacs. If additional plug-in LTU are needed, simply select desired plug-in software product number LTU multiplied by quantity LTU desired.
- For example: Customer needs 5 additional TBs for SRM File System Viewer (T4292AA) Order:
  - T4292AA multiplied by quantity (5); therefore order QTY (5) T4292AA 1 TB LTU.

#### Ordering Examples Storage Essentials SRM Suite Tier 2 (Higher quantity purchase tier only)

- For the Storage Essentials SRM Suite, you can order add on Storage Essentials SRM plug in software in quantity to achieve quantity benefits. The following products (SRM File Systems Viewer, SRM Exchange Viewer, SRM Database Viewer, SRM NAS Manager and SRM Backup Manager qualify for quantity orders with a SRM Standard Edition purchase. See ordering example:
- Customer wants to order additional plug in Storage Essentials SRM Suite Software including 10 MALs SRM Exchange Manager, 20 TBs of SRM File System Viewer and 40 TBs of SRM Backup Manager. This is what you order:
  - Quantity (10) T4288AG Storage Essentials SRM Exchange Manager 1 MAL LTU
  - Quantity (20) T4292AG Storage Essentials SRM File System Viewer 1 TB Tier-2 LTU
  - Quantity (40) T4295AG Storage Essentials SRM Backup Manager 1TB Tier-2 LTU

**NOTE:** The description in the tier 2 LTU represents the purchase quantity you must start at to achieve tier 2 benefits. However, when you order LTU, please do so in the smallest allowable LTU increment. In the case of MAP that is 50, MAL 1, User 1, and TB is 1. For example for an order of 12 SRM Exchange Viewer MALs, order (12) T4288AA, you cannot order (12) T4288AG since 12 MALs does not meet the minimum of 20 MAL using the Tier-2 SKU. If you needed to order 25 MALs in one purchase, then order (25) T4288AG.

#### HP E-Delivery ordering:

- E-Delivery definition – Electronic Software Delivery delivers via e-mail the purchased SRM Storage Essentials software which guides the customer to download files currently available worldwide excluding Japan.
- To place an order, please refer to the E-Delivery product number column in the Models section of this QuickSpecs and order the applicable quantity of E-Delivery E-Media kit (T5314AAE) and E-LTU (T5315AAE). For example, if the customer wants a single order of Standard Edition plus 6 TBs extra capacity in addition to the 4TBs already included of File System Viewer, here

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is what you would order:

- One (T5314AAE) E-Media Kit
- One (T5315AAE) E-LTU
- Six (T4292AAE) File System Viewer E-LTU

### Customer Benefits

- **Reduce storage management complexity in smaller HP Storage based mid-market SANs:**  
Integrated tool-set guides you through the big SAN picture. It reduces SAN complexity and SAN costs and increases administrator efficiency by automating complex and manual storage tasks from a single, Web-based, management console. HP Storage Essentials SRM Software with HP Systems Insight Manager software leads the industry in unified server, storage and infrastructure management.
- **Automated SAN discovery, visualization and topology mapping speeds device identification:**  
Automatically discovers all the physical components in the storage environment including applications, servers, HBAs, fabric switches, host clusters and storage devices (SAN and NAS) and backup topology. Having accurate data with an up to date big picture eliminates time spent on manual tools or building complex spreadsheets and Visio diagrams, which are not real-time.
- **Built on industry standards:**  
Designed on the Storage Management Initiative Specification (SMI-S), an industry standard for storage management based on the Common Information Model (CIM) and standards including WBEM, WMI, JBoss and J2EE to demonstrate the solution is extensible, interoperable and supports the insertion of 3rd party technology.
- **Integrated with HP Storage Essentials SRM Enterprise Edition Software Suite:**  
HP SRM Standard Edition software integrates with the HP Storage Essentials SRM Enterprise Edition Software Suite. This is paramount for IT shops to have a convergence of advanced SRM features like capacity planning, provisioning and extended reporting that scales from small to mid-market SANs to larger enterprise heterogeneous complex SANs while using a common management interface.
- **Affordable SRM solution increases IT Staff efficiency, monitors SAN and HP EVA performance and simplifies SAN troubleshooting:**  
A single IT administrator can monitor and control health, end-to-end SAN performance, as well as HP EVA performance monitoring, storage utilization, and reporting of all key infrastructure including servers, storage, tape, NAS, HBAs, FC switches, host clusters and backup devices. Having a single view of infrastructure aids in faster end-to-end troubleshooting to eliminate performance bottlenecks with quicker problem resolution.
- **Consistent security model across management domains:**  
Leverages OS security for user authentication and Secure Sockets Layer (SSL) and Secure Shell (SSH) to encrypt management communications. Role-based security gives IT administrator's granular control over user access on selected devices.
- **Holistic view of storage from the application level provides quicker problem resolution:**  
Industry recognized for excellent application integration HP SRM Standard Edition Software takes advantage of HP Storage Essentials SRM Software, SRM Exchange and SRM Database Viewers to monitor and control storage infrastructure at the application level down to the spindle for storage. Software supports Oracle database, Microsoft SQL Server Sybase database, Microsoft Exchange Server and InterSystems Cache'.
- **High performance scaleable file-level scanning, analysis and reporting:**  
File-level scanning, analysis, reporting and policy-based management capabilities helps reclaim wasted space and ensures file server availability. You can respond faster to file server out-of-space conditions, and classify unstructured data in support of Information Lifecycle Management (ILM) initiatives.
- **Common interface simplifies SAN and NAS management:**  
Provides comprehensive networked attached storage (NAS) for HP ProLiant Storage Servers. Helps IT staff visualize your distributed HP NAS solutions and centrally manage capacity, performance, events, and dependencies to ensure NAS availability and performance with unified SAN and NAS management.
- **Complete and easy to order SRM solution:**  
HP Standard Edition SRM Software solution includes media and licensing. HP Installation and Startup Service helps facilitate a smooth software deployment to help address your business needs. Installation, configuration, verification testing, documentation, and a customer orientation session are included.
- **Easy migration path from midmarket to enterprise**

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As mid-market companies grow they need to incorporate enterprise SRM solutions into their plans, HP Storage Essentials SRM Standard Edition to SRM Enterprise Edition Upgrade provides mid-market businesses with scaleable growth to enterprise when business grow.

### Software Features/Functionality

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#### Simplifies management and increases administrator efficiency

- Integration with HP System Insight Manager for Unified Server and Storage Management
  - Unified interface for end-to-end HP EVA and SAN performance management
  - Integration with ProLiant Essentials for efficient and centralized server management
  - Automation of network (SAN, NAS) discovery and time consuming tasks
  - Big picture discovery and visualization of storage resources
  - Manage more storage SAN capacity with the same number of resource
  - Faster end-to-end troubleshooting
  - HP E-Delivery simplifies ordering and speeds delivery of product
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#### Increases administrator efficiency

- Integration with HP System Insight Manager for Unified Server and Storage Management
  - Integration with ProLiant Essentials for efficient and centralized server management
  - One integrated tool-set and management console
  - Optimize utilization of existing assets
  - Automation, visualization and topology mapping of storage network devices ( SAN, NAS, Servers, HBAs, FC switches) simplifies discovery for repetitive time consuming tasks
  - HP E-Delivery eliminates the need to manage all the paper LTU and software boxes
  - Manage more storage SAN capacity with the same number of resource
  - Faster end-to-end troubleshooting of Storage infrastructure
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#### Increase utilization

- Soft quota management
  - Identify old, large, junk, duplicate files
  - Just-In-Time purchase of capacity via trend analysis
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#### Improve Quality of Storage Service

- Visualize Application-to-LUN mapping
  - Improve availability
  - End-to-end Application to infrastructure performance monitoring
  - Monitoring of all elements in the SAN
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#### Protect Investment

- Standards based product design based on SMI-S, WMI and WBEM
- CLI, API, and ODBC/JDBC interface for integration into existing environment
- Selected SRM Enterprise Edition plug-ins available to SRM Standard Edition Software simplifies training and ordering
- Single interface for midmarket SANs to enterprise heterogeneous SANs
- Reduce capital expenses

### Hardware Support

#### Supported Fibre Channel and SCSI HP Storage Devices

- HP StorageWorks Enterprise Virtual Array (EVA) EVA3000/4100/5000/6100/8100
- HP Modular Storage Array (MSA) MSA1000, MSA1500
- HP ProLiant Storage Server (NAS)
- HP EML E-Series Tape Libraries (245e, 103e)

#### Supported Interconnect Devices – Switches

- HP StorageWorks (B-series) Core Switch 4/32, 4/32B, 4/64, 2/64, 2/16, 2/16N, 2/16V, 2/8, 2/8V, 4/8 & 4/16 SAN SW 200E, MPR400; Director 2/128 and 4/256 SAN Director 4/48 Blade
- HP StorageWorks (M-series) Director 2/64, 2/140; M4400, M4700, Edge Switch 2/16, 2/24, 2/32, Intrepid i10K
- HP StorageWorks (C-series) MDS 9216, 9120, 9124, 9140, 9216, 9506, 9509, 9513, 9020
- Brocade 4Gb SAN Switch for HP c-Class BladeSystem
- Brocade 4Gb SAN Switch for HP p-Class BladeSystem
- McData 4Gb SAN Switch for HP p-Class Blade System
- Cisco MDS 9124e Fabric Switch for C-Class Blade System
- Brocade SilkWorm 200E, 32xx, 38xx, 3900, 4100, 4900, 7500
- Brocade and OEM equivalent: Director 12000, 24000, 48000
- Brocade 6400
- McData and OEM equivalents ES-1000, 3016, ES-3032, ES 4300, ES-3200 series, ES-4500 series, Intrepid i10K
- McData and OEM equivalents Director ED-6140, ED-6064, ED-5000
- Cisco and OEM equivalents MDS 9020, 9216, 9216A, 9120, 9140
- Cisco Directors 9506, 9509, 9513
- CNT FC/9000-64 (1gbps), FC/9000-128 (1gbps), FC/9000-64 and FC/9000-128 (2gbps), UMD
- QLogic Sanbox 1-8, 1-16, 2-8, 2-16
- QLogic 5200
- QLogic Sanbox Director 2-64
- EMC Connectrix DS-16M, DS-24M2, DS-32M2
- EMC Connectrix Director ED-1032, ED-64M, DS-4700M ED-10000M, ED-140M
- Sun StorEdge 2GB Network FC Switch 8-port, 16-port, 64-port

**NOTE:** Although Director class or large switches can be discovered by SRM Standard Edition, a configuration comprised of larger switches may not be supported if MAP count exceeds 150 MAPs. GBICs for unused ports in a larger switch can be turned off to minimize MAP count usage.

## Hardware Support

Hardware Pre-Requisites On combined management server with HP SIM:

- **Processor:** Dual Intel XEON or AMD equivalent (32-bit OS only) 3.4 GHz or higher (recommended)
- **OS:** Windows Server 2003, Enterprise Edition and Windows Server 2003, Datacenter Edition (32-bit only, SP1); WS2003 R2 (32-bit only) Enterprise Edition and Server Edition
- **Memory:**
  - To address beyond 4GB, need PAE (Phys Address Ext) and Windows 2000 Datacenter or Windows 2000 Advanced Server (SP4) or Windows 2003 Enterprise Edition or Windows 2003 Datacenter (SP1) (32-bit only)
  - Minimum: 6 GB (For smaller configurations monitoring 20 or fewer devices; includes 2GB requirements for combination with HP SIM)
  - Recommended: 8 GB
- **Disk space:** Minimum 150 GB recommended; add an additional 100GB or more for archiving/backup

**NOTE:** Linux Management Server (CMS) is not supported on SRM Standard Edition, but is supported on SRM Enterprise Edition.

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## Distribution Media

- CD ROM (physical CDs and DVD) or E-Delivery (Electronic download of bits)

### Software Support

- Software Pre-Requisites**
- HP Systems Insight Manager 5.1 SP2 or greater (Windows); HP Systems Insight Manager (Linux) 5.1
  - Oracle database 10g release 2 (10.2.0.3)
  - Device Managers for each managed device (arrays, switches, tape libraries, etc.)
  - Microsoft Internet Explorer, Netscape Navigator, or Mozilla
  - For Windows, latest Windows updates

Application / Database Support	Database	Version	Platform
	Oracle	8.1.7	Windows NT, 2000 and 2003
	Oracle	9i	Windows 2000 and 2003 Linux AS3.0, Suse 9
	Oracle	10g R2 Versions: 10.2.0.3.0	Windows 2000 and 2003 Linux AS3.0, Suse 9
	Sybase	ASE 12.5.0, 12.5.1,12.5.2	Windows 2000
	Microsoft-SQL Server	2000, 2005	Win 2000 (64-bit), 2003 (includes IA64)
	Microsoft-Exchange	2000 (SP1, SP2, SP3)	Windows
	Microsoft-Exchange	2003 (SP2)	Windows
	Microsoft Exchange	2007	Windows
	InterSystems Cache'	5.0.20, 5.2	Windows

- Host Cluster Support**
- Automatic discovery of Microsoft Cluster Server (2003)

**NOTE:** Storage Essentials SRM Cluster Host Builder Wizard – helps customize host cluster visualization by allowing the user to manually create/edit cluster relationships for supported host in cluster configurations not automatically discovered by Storage Essentials SRM Software

**Operating System requirements**

- Managed Hosts:**
- Windows 2000 SP4 (Standard and Advanced Editions) Windows 2003 SP1 (x86, x64, IA64), Windows 2003 R2 (x86, x64), Windows 2003 R2 SP2 (x86, x64), Windows 2003 SP2 (x86, x64, IA64); (Standard, Enterprise, and DataCenter Edition)
  - Linux Red Hat: AS/ES 3.0 (x86, x64) No Update or Update 1-6; AS/ES 4.0 U1-U4; (x86, x64, IA64); RHEL AS/ES 5.0 (x86, x64, IA64) (Advanced and Enterprise Server)
  - Linux SuSE: SuSe LINUX Enterprise Server Release 9 Update 3 (x86, x64, IA64); SuSe LINUX Enterprise Server Release 10 Update 1

**Centralized Management Server (CMS):** Windows

Windows CMS

For dedicated OR shared management server:

- Windows 2003 SP1 (32 bit Ent Ed or Datacenter on x86/x64 platform); Windows 2003 SP2 (32 bit Ent Ed or Datacenter on x86/x64 platform); Windows 2003 R2 (32 bit Enterprise Edition or Server Edition on x86/x64 platform); Windows2003 R2 SP2 (32 bit Enterprise

Edition or Server Edition on x86/x64 platform)

**NOTES:** HP configurations only

1. The HP-SIM integrated version requires English or Japanese localization.
2. It is recommended Windows Update be used to keep the Windows operating system current.
3. Database: Oracle 10g release 2 (10.2.0.3)
4. Application Server: JBoss (installed with the management server software)

Recommend the management server is a dedicated server, with no other applications or databases residing on management server other than those explicitly listed.

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**Web Client**

- Microsoft Internet Explorer (5.5 or higher)
- Mozilla (1.7+)
- Firefox (1.5.0.1.+ , Windows, Red Hat, SuSE)

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**Software Installation  
Licensing**

HP Storage Essentials SRM Software is not customer installable and requires a mandatory HP Installation and Startup Service delivered by a HP professional service representative or a HP Certified Partner. HP Storage Essentials SRM applications require evaluation or permanent license keys to operate. When you receive your entitlement certificates for evaluation or permanent licenses, you must register these licenses prior to using the Storage Essentials SRM product. Your entitlement certificate will reflect the Storage Essentials SRM products and licenses selected/purchased. Evaluation licenses allow the entire Storage Essentials SRM product suite to operate for the time period stated on the evaluation entitlement certificate (typically 90 days).

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**Software Warranty**

Warranty code 3C; duration of limited warranty: 90 days from the day of purchase, replacement of defective media

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

#### Service and Support Information

HP Care Pack Services offer upgraded service levels to extend and expand your standard product warranty with easy to buy, easy to use support packages that help you make the most of your hardware and software investments. They let you choose the support levels that meet your business requirements, from basic to mission-critical. They help you contain total cost of ownership.

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Your standard warranty protects against product defects. HP Care Pack Services help you guard against unplanned downtime, which can reduce your productivity and profitability. These convenient service packages:

- Protect your investment in HP products
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- Are available whenever and wherever you do business

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

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#### 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.

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](ftp://ftp.compaq.com/pub/products/storageworks/warranty/EN_321708-008.pdf)

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#### Recommended Services

Three years of HP Software Support 24 x 7

- Improve the productivity of system managers and operators
- Improve system performance and reduce downtime due to software defects
- Expedite problem resolution through expert-level technical resources
- 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

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

**Available HP Care Pack Services** Extend your product warranty with a wide choice of cost-saving support packages. HP Care Pack Services are sold by HP and HP authorized enterprise and commercial resellers. Services for customers purchasing via direct and enterprise resellers are quoted using HP order configuration tools. Additional information about HP Care Pack Service features and benefits is available at <http://support.openview.hp.com/supportoptions.jsp>

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**HP Care Pack Services - Deployment and Per Event Services** HP Storage Essentials SRM Software is not customer installable and requires HP Deployment Service delivered by a HP professional service representative or a HP Certified Partner. For more information about Deployment and Per Event Services for HP Storage, visit <http://www.hp.com/hps/storage/>

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**HP Care Pack Services Availability Services**

- HP Software Support - business hours phone support and software updates, available in 1 and 3 year durations
- HP Software Support 24x7 - 24x7 phone support and software updates, (available in 1 and 3 year durations)

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**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.

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

Features include:

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

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

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**HP Education and Services Information** For more information about Deployment, Per Event, Consulting and Education services for HP Storage Essentials software, visit: <http://www.hp.com/education/courses/uc424s.html>

For more information about HP Care Pack Services for Storage, visit: [http://www.hp.com/hps/carepack/storage/cp\\_networked.html](http://www.hp.com/hps/carepack/storage/cp_networked.html)

For more information about HP Storage Software, services and updates, visit: <http://h18006.www1.hp.com/storage/software.html>

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

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