HP StorageWorks Reference Information Storage System

Transform reference data into an information asset

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Solutions for the adaptive enterprise.

hp invent

Unraveling data challenges

HP understands that in today's competitive world, any successful business is dependent on its ability to exploit information. Providing access to complete and accurate information helps customers make faster, better informed business decisions. But at what cost? Data growth for many organizations is out of control. And data growth creates new challenges. How do I guarantee access to the right information at the right time? How do I balance data growth, data accessibility and cost? How do I mitigate risk while ensuring compliance with relevant data retention regulations?

Compounding these data management challenges is the ever-present mandate to align IT with business requirements. Agility is the objective—business and IT synchronized to capitalize on change achieves better resource utilization, maximizes ROI, and streamlines costs. HP addresses these data challenges by placing data in the hands of the decision makers. The result is business with an agility advantage.

Turning data into an information asset

As businesses grapple with exploding data, they are recognizing the need for automated information management to mitigate risk, manage regulatory compliance, and reduce costs. These needs are driving HP innovation. Throughout all the stages of the life cycle of data, businesses must store, protect and provide access to data, in full alignment with the business needs of the organization. In each stage of the life cycle, data is placed in the storage infrastructure according to its value to the organization. HP offers the processes to align business with technology and turn data into an information asset.

HP StorageWorks Information Lifecycle Management—the next phase in storage evolution

Information Lifecycle Management is the next phase in storage evolution. HP Information Lifecycle Management processes provide the intelligence to efficiently transform data into an information asset, comply with growing regulatory requirements, and protect information from disaster and corruption. HP StorageWorks Information Lifecycle Management (ILM) helps organizations manage change by recognizing that information changes throughout its life cycle. The bottom line is people need access to data. HP StorageWorks ILM processes offer a broad range of products robust enough to cut through complexity for improved management and effective information access. Superior business agility is the objective and ILM processes enhance, extend, and link business processes and applications across the storage infrastructure.

HP StorageWork ILM strategy delivers on three major information management challenges:

Retention Management—focuses on minimizing risk. Corporate governance and government regulation require retention policies. Companies may be compelled in an audit or legal proceeding to produce e-mail communications or other electronic records.

Data Management—focuses on lowering costs and improving service level objectives. Information growth continues to be unstoppable. Reduce management costs while maintaining service-levels of information based on its business relevance. Reduce backup time.

Remove

Protect & recover

Archive & recall

Create & modify

Copy & distribute

Reference Information Management—focuses on utilizing information as an asset or getting improved ROI. Retrieve valuable information rapidly from the vast pools of data. Extract maximum value from information by mining archives for market intelligence and Customer Relationship Management (CRM). Powerful indexing and archive search tools and online accessibility.

HP—storage solutions for the entire life cycle

The HP StorageWorks product family is unique in that it introduces storage solutions for the whole information life cycle. Terabytes of inaccessible data are transformed into a corporate knowledge asset. The underlying philosophy of HP StorageWorks ILM is to utilize current proven, reliable and extensible solutions and architectures. And HP innovates where necessary to expand capabilities where business imperatives demand. HP takes a solutions approach to give our customers application transparency and accelerated time to value. HP offers a broad range of products and services to automate the management of information throughout its life cycle.

Create and modify
- Online disk array solutions like HP StorageWorks XP, Enterprise Virtual Array (EVA) and Modular Smart Array (MSA) family

- HP StorageWorks Network Attached Storage (NAS) portfolio

Copy and distribute
- A full range of array, appliance and host-based replication methods

Data protection and recovery
- HP OpenView Data Protector

- HP StorageWorks tape devices and tape libraries

Archive and recall
- HP StorageWorks optical jukeboxes

- HP StorageWorks Reference Information Storage System (RISS)

HP Services are available at every stage of the life cycle, providing custom services designed to increase your return on IT. In addition, HP offers strategic partnerships with vendors to augment HP offerings.

ILM and the adaptive enterprise

HP StorageWorks ILM strategy delivers significant elements to the HP adaptive enterprise vision—the ultimate state of fitness in a world where every business decision triggers an IT event. ILM in the framework of the HP adaptive enterprise vision dynamically supplies and links the right storage resources to meet business demands. Integrated Storage Resource Management (ISRM) provides the foundation for ILM in the HP adaptive enterprise vision. The ISRM is the command center for subsystem functions. Integrated Storage Resource Management is delivered through HP OpenView Storage Area Manager (SAM) and other products.

The corporate memory—introducing HP StorageWorks Reference Information Storage System

Reference information is the fastest growing area in data management. And, as reference information grows unabated, the challenge is to comply using cost-effective proactive processes that offer viable solutions for future growth. Data growth is exploding and reference information is growing even faster. In fact it is expected that by 2004 reference information will surpass the amount of new operational data being created.[1] Reference information is the corporate memory, but it also represents an additional layer of data to be managed by hard-pressed IT organizations. Risk mitigation, compliance, accessibility and cost all need to be balanced.

HP StorageWorks Reference Information Storage System is a fully integrated and highly scalable active achieving solution for storing reference information. RISS reduces costs, mitigates risk and provides unprecedented accessibility for long term storage. HP StorageWorks Reference Information Storage System:

- Automatically harvest data from primary systems—reduce information overgrowth and control storage costs

- Accomplishes high scalability—from Terabytes to Petabytes of data without loss of performance

- Achieves full content indexing with grid computing architecture for rapid search and retrieval—exploit your information assets

- Performs time stamping and authentication—to assist customers with data retention regulations compliance

1 InfoStore magazine

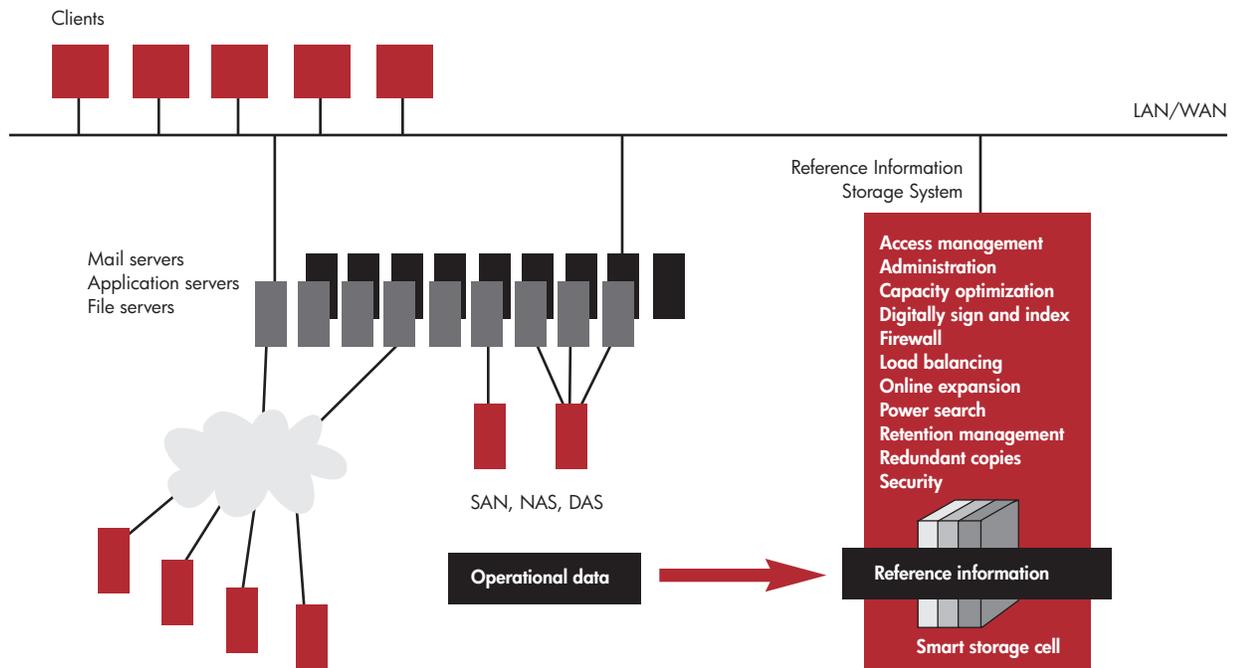- Offers a complete solution—everything you need from one source: HP

Now you can deploy a single scalable solution to manage the cost of keeping reference information and meeting the requirements of compliance regulations successfully. Plus, with RISS, you get the benefit of a complete solution that adds value using application-independent data search and retrieval.

Reference Information Storage System reduces storage costs

At the core of all reference information are issues concerning the volumes of records that must be archived, indexed, and managed. Consider e-mails. Research into corporate e-mail use estimates the average corporate e-mail user sends/receives 76 e-mails daily. For a 50,000 employee enterprise, that means 19 million messages per week. In one year, nearly 1 billion e-mails are generated. Add attachments and other office productivity files to these numbers and you truly have a "needle in the haystack" scenario. Compared to a standard e-mail installation Reference Information Storage System offers the following benefits:

- Older e-mails archived to Reference Information Storage System—you are no longer reliant upon mailbox quotas to contain primary storage expense/volume

- Improved server availability—Reference Information Storage System archives e-mails reducing server load, allowing servers to run more efficiently

- Less primary storage is required—older data is stored on the Reference Information Storage System

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Clients

LAN/WAN

Reference Information
Storage System

Mail servers
Application servers
File servers

Access management
Administration
Capacity optimization
Digitally sign and index
Firewall
Load balancing
Online expansion
Power search
Retention management
Redundant copies
Security

SAN, NAS, DAS

Operational data

Reference information

Smart storage cell

- True cost savings—increases in users and volumes no longer require increases in mail servers and related storage

- All data on Reference Information Storage System is protected—you no longer need to manage local personal files that may or may not be backed up

- Faster, smaller backups—reduces back up time liberating resources for more value-added tasks and lowers administrative costs

Refining the paradigm— unprecedented scalability

HP StorageWorks Reference Information Storage System is refining the reference information storage paradigm. Specifically, the ability to scale from Gigabytes to Terabytes to Petabytes without performance loss or increases in operating costs. We accomplish this advancement using a utility computing approach to build the reference information store.

The most powerful search and recovery tools available

Archiving data isn't just about putting data in, it's about getting information back out.

The HP StorageWorks Reference Information Storage System combines advanced indexing with a grid computing storage architecture. These innovations allow RISS to deliver the most powerful search and retrieval capability in the industry. HP uses a "divide and conquer" capability that the competition simply does not have. The response time of HP StorageWorks Reference Information Storage System remains equal whether you are searching through an archive of one thousand or one billion e-mails. RISS scales in parallel, so every time you add capacity, by definition you add processors, indexing and fault tolerance.

Reference Information Storage System reduces risk

Some companies operate in heavily regulated industries and some do not. But all organizations are waking up to the fact that badly managed data is a corporate risk.

What is needed is greater control. Whether the data is needed to defend a lawsuit, prove compliance with a data retention regulation or whether accurate records preservation is just a case of good corporate governance, HP StorageWorks Reference Information Storage System can help. RISS includes multiple features for data management risk reduction including the automated migration of data to the archive, the protection of the data with time stamps and digital signatures, and the

> HP StorageWorks Reference Information Storage System is the only archiving product in the industry to deliver a total solution.

ability to provide certified proof that the data has not been tampered with. Moreover, any data in the archive cannot be deleted or modified until the end of its retention period (at the end of this period, the document is erased and the disk space recycled for future use).

A total archiving solution

HP StorageWorks Reference Information Storage System is the only archiving product in the industry to deliver a total solution that includes all the hardware, software and services needed to protect your reference information. No other vendor can offer this—they only offer components. The installation of HP solutions involves minimal disruption or reconfiguration to existing applications. It is a self contained, self managing and fault tolerant system. Powerful storage and retrieval software supports open protocols, including SMTP, HTTP, and IMAP4 unlike vendor-specific, proprietary solutions that have the potential to lock-in data. Uniquely, the HP solution provides application independent, full text search and retrieval. For example, all reference information that contains a key word can be accessed in a single search operation regardless of what application created the information. For high performance, HP StorageWorks Reference Information Storage System utilizes multiple smart storage cells in a grid computing architecture to provide unprecedented response times even for complex enquiries. Each smart storage cell combines both computing intelligence and storage capacity so that as demand grows, additional storage smart cells can be added without disruption and without performance degradation.
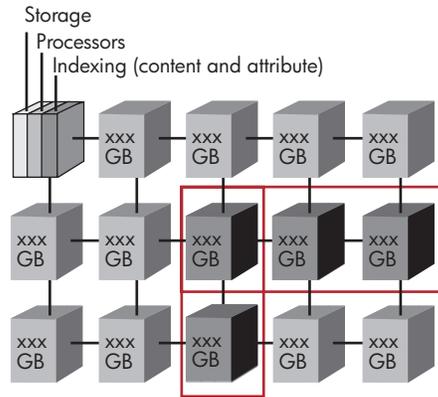
Putting it all together

This union of ultra-smart archive index and retrieve software with high powered, highly scalable storage offers:

- Reduced primary storage cost and shrinks backup windows

  – Data migration moves static data to lower cost reference information storage

- Powerful integrated search tools

  – Transforms data into an information asset providing fast retrieval of archived content

  – Supports free text searching—uses any Web browser or works directly from Microsoft® Outlook Graphic User Interface (GUI) to search and retrieve

  – Accelerates information discovery—offers easy access for compliance audits

- Advanced computing architecture

  – Accelerates data retrieval by evenly distributing full text indexes and original content across many smart storage cells

  – Executes parallel searches—providing comprehensive searches using smart cell technology

Storage
Processors
Indexing (content and attribute)

xxx GB (repeated for grid cells)

Powerful indexing and search
performance for reference information

Scalable modular capacity

Designed for billions of documents

Redundancy for high availability

- High performance search tool integrated with
  end user applications

  – Provides intuitive, end user access to
    archived documents

  – Reduces impact on scarce IT resources

  – Supports e-mail, Microsoft Office data types,
    and other ASCII file types

- Robust application-aware policy engine

  – Offers application-aware retention policies that reflect
    the business value of information, i.e., all e-mails of a
    certain age or size automatically migrated to archive
    and are deleted from user's inbox; deleted e-mails are
    then accessible through the archive

  – Currently supports Microsoft Exchange, Microsoft
    Office, Lotus Domino, and Sendmail data types with
    plans to support other data types in the near future

- Powerful automated archiving of all new records/files

  – Enables compliance with data retention regulations
    requiring all e-mails be archived for a predefined
    retention period

- Data security is digitally signed, time stamped and
  protected from erasure

  – Enables compliance with data retention regulations
    by protecting content from change or deletion

  – Uses disk as a WORM (Write Once Read
    Many) media

- Rapid migration of legacy files to central archive

  – Consolidates poorly managed, non-compliant
    personal e-mail folders to consolidated, centrally
    managed, and easily searched reference
    information storage

- Fully integrated hardware, software and services

  – Maximizes time to value

  – Minimizes cost of ownership

  – All elements of the system fully serviced and
    supported by HP

- Automatic removal of duplicate data objects

  – Creates cost-effective use of available
    storage capacity

- Scalability—scales to billions of files

For more information

With HP StorageWorks Reference Information Storage
System, storage and retrieval of reference data has never
been easier. This self-contained, self-managing and fault-
tolerant system transforms unstructured reference data into
exploitable information. Now you can manage
storage costs and comply with data retention regulations
with one solution. Now you can deploy a single, highly
scalable cost-effective solution to manage excessive
reference information.

For more information on HP StorageWorks Information
Lifecycle Management and Reference Information Storage
System, visit: **www.hp.com/go/ILM**

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