Network Computing: Data/ILM Comparative Analysis

PR Contact:
Alan Dunton
415-591-4036
alan_dunton@sfo.bm.com

QUESTIONS

1. Development Status and Objectives. Describe your vision of D/ILM and identify what features or functions your platform currently provides and what features or functions are still in development.

HP recognizes that information has a lifecycle. HP addresses ILM today the way customers manage data, through the following stages:

1. Create and/or modify
2. Copy and distribute
3. Archive and recall
4. Protect and recover
5. Remove

In truth, ILM is a new marketing term--not a new technology concept. HP has been providing ILM-related technologies for more than ten years. HP's strategy addresses challenges associated with ILM through a combination of software, hardware, services and partners.

ILM represents the set of processes and supporting tools that help companies manage its business information from cradle to grave. Our current platforms focus on the major building blocks of ILM--the operational data store and the reference data store. The goal of ILM is to actively manage information across its lifespan, based on its changing business relevance over time.

For simplicity sake, we will focus on HP's archive and recall capabilities throughout this document. However, HP offers technologies that address each of the five stages of ILM including a suite of data protection and recovery solutions, infrastructure solutions, an archiving product and some initial policy management. In development are additional policy management tools, hardware infrastructure and general improvements to the existing foundation. If you would like additional information regarding either our existing or future offerings, please call.

2. Development Partners. List the vendors with whom you are working to deliver your D/ILM solution functionality.

HP offers a range of solutions to solve our customers' problems. Some of these solutions are based on HP's intellectual property, and others incorporate our partners' technology. Our partners' products and solutions complement our offerings and ultimately serve to provide HP's customers with solutions we could not deliver alone.

Current suite of partners includes:

Healthcare & PACS Partners

AGFA	Fuji Film	InSite One	MEDITECH
Cerner	GE Medical Systems	Lawson	Philips
Eclipsys	IDX	McKesson	Siemens

Enterprise Backup & Archiving Partners

Atempo	Computer Associates	Qstar Technologies	Veritas

BakBone	Dantz	SyncSort	
CommVault Galaxy	Legato	Tivoli	

E-Mail Archiving Partners

Avamar	CommVault	IXOS	Mirapoint

ILM Partners

Avamar	CommVault	IXOS	KVS	Mirapoint	Persist	Qatar

Additionally, in November 2003 HP purchased Persist Technologies, which provides an end solution for archiving, search and retrieval of emails and office documents. This technology gives HP both a back end archiving appliance architecture as well as an email archiving front end for pressing and immediate customer needs.

3. Data Naming Scheme. What is your method for identifying data storage requirements or characteristics and for using those requirements or characteristics in building policies?

HP's method focuses primarily on the business metrics which identify the areas of IT where we can offer a significant reduction in total cost of ownership.

4. Access Frequency. Identify the mechanism by which your solution identifies how frequently specific files or datasets are being accessed and whether and how access frequency is used in migration policies.

Our solutions position data on the appropriate platform to meet the required access service level agreement (SLA). Contrary to other competitive solutions, HP does not segregate data by access frequency because we focus on the business value of information when it needs to be accessed. Our archive and recall solution provides identical data access characteristic regardless of the age of the information or the capacity point the data has reached. This solution is time and capacity tolerant—giving information access speeds equally as fast for the first 100,000 emails as for the first 1 billion emails.

5. Storage Platform Characterization. Explain the mechanism that your solution provides for characterizing the performance capabilities and costs of specific hardware platforms for data storage so that this information can be used to target the appropriate storage platforms as destinations for automatically-migrated data.

See above.

6. End of Useful Life. Explain how your platform facilitates the automated removal and clean-up of data that has outlived its useful life and restoration of freed capacity for use by applications.

Data purge or clean-up is solely driven by application of the corporation's own retention policies. When the retention period ends, the removal of information is automated.

7. Policy Articulation. Describe how policies are created and how they are applied to existing data.

Policies are created to reflect SLA and retention policies.

8. Device Support. What storage devices does your product support? Are their any proprietary devices (controllers, arrays, HBAs, switches, SAN topology, virtualization products, etc.) that are required for your solution to work?

The basic building block of the HP archive solution is HP's Smart Storage Cell. The architecture is built on industry standard hardware available from HP today, and is designed in a grid

computing architecture. The hardware components are held together in the grid via technology HP acquired through the acquisition of Persist. This architecture is fully redundant down to the Smart Storage Cell level, and maintains a constant relationship over time between storage capacity, processors and indexing for the intelligently archived information.

9. Resource Consumption. How much bandwidth and server CPU "overhead" is introduced by your solution (e.g., to support polling processes, migration processes, agent processing, access frequency counting, etc.).

Less than 15-percent of the exiting infrastructure bandwidth is used to interface our ILM solutions to the existing infrastructure.

10. Flexibility. Does your solution have multi-vendor support? Can data, once integrated into your D/ILM scheme be migrated readily between your solution and other solutions in this space? Is you solution interoperable with other solutions in this space?

Our solution is platform independent and supports concurrent heterogeneous application platforms. If a customer has a heterogeneous data storage environment today, HP technology can pull data from the existing DAS, NAS and SAN storage for active archiving.

11. Speeds and Feeds. How should a prospective customer compare the relative performance of competitive solutions in this space? What are the appropriate performance measures or metrics to use in evaluating competitive solutions?

Customers should focus on the following metrics:

- Total amount of information objects processed per second
- Time to information access as a function of the number of concurrent requests
- Total amount of information objects under management per instance of the solution
- Total cost of ownership

12. Interconnect Support. List the network or fabric interconnects that you support. Is there an optimal interconnect for data movement for your solution? What about for management?

Gigabit Ethernet and Fiber Channel are the recommended interconnect for data and IP for management.

13. Protocol Support. List the storage networking technologies supported, including FCP, Ethernet, iSCSI, FCIP, iFCP, Parallel SCSI, SAS, and network file system protocols (NFS, CIFS, HTTP, DAFS).

IP, SMTP, IMAP4, HTTP, HTTPS, SOAP, CIFS

14. Data Type Support. List the data types supported by your solution, including file types and file systems, databases, and hybrids such as email. Comment on the granularity of your D/ILM solution: will it support the migration of database components or subsets, subsets of email files, etc.?

HP's initial archive solution is focused on unstructured hybrid data, such as email, office document and rich media. However, as stated in our response to question one, HP offers technologies that address each of the five stages of ILM including a suite of data protection and recovery solutions, infrastructure solutions, an archiving product and some initial policy management.

15. Cost. List the cost of your solution or provide some means for calculating cost for a specific environment.

Costs are a factor of the components assembled into a solution as well the price of additional ILM services that may be desired and thus very difficult to estimate. Because so many "solutions" are in fact only single elements such as a front end, a back end or a middleware product, with no fault tolerance, no reference indexing, no clustering for fail over, no search engine, no file system, no services or a host of other products that may be required for a single product solution, an "apples-to-apples" comparison in not practical.

16. Standards. List any relevant open standards upon which your product is built.

Java J2EE, IP, SMTP, IMAP4, HTTP/S, SOAP

Other features. List other pertinent aspects of your solution.

Based on discussions with industry analysts and customers, it is clear that Services are not an addition to an ILM implementation but in many cases are the beginning of the process. This is because ILM is not a one-time activity. Rather, it is an ongoing business process that requires a long-term customer relationship. Services are an integral part of HP's ILM solutions as these solutions require ongoing management and refinement.

HP Services has five ILM-related services offerings:

1. Backup and recovery services
2. Data protection services
3. Archiving services
4. Data replication
5. Data sanitization

Miscellany: Please note any additional information that you think would be worthwhile for prospective customers to consider about your solution or other solutions in this space.

Storing, replicating, backing up and archiving data is the easy part. Our customers are very focused on the rapid retrieval of data that is securely stored. HP ILM solutions portfolio and ILM development programs are focused on making data easier to find and access after it is stored, replicated, backed-up, or archived. This is our development and product focus—meeting customer needs.

HP is also working with customers in a wide range of vertical and horizontal application areas as well as policy creation and automation. HP understands that ILM is a business process, not just a storage device. It is our goal to develop and deliver holistic solutions that span hardware, software and services beyond storage – that address the need for business and IT to be synchronized to capitalize on change.