

Information on demand: Information Lifecycle Management (ILM)



In order for your business to run efficiently, you need fast access to your stored data. But in today's business environment, you face increasing challenges: the explosion of the sheer volume of digital information, the

increasing cost of storage management, tight data retention regulations and increasingly complex and error-prone manual business and IT processes.

IBM TotalStorage Information Lifecycle Management (ILM) solutions are designed to help overcome these challenges by recognizing that different types of information can have vastly different value at different points in their lifecycle—even within a given data type (for example, recent e-mails probably have great value but their value tends to fall very quickly).

ILM is the process of managing information—from creation through its useful life, to its eventual destruction—in a manner that aligns storage costs with the changing business value of information.

An IBM ILM solution in a tiered storage environment is designed to:

- *Reduce the total cost of ownership (TCO) of managing information. It can help optimize data costs and management, freeing expensive disk storage for the most valuable information.*
- *Segment data according to value. This can help you create an economical balance and sustainable strategy to align storage costs with business objectives and information value.*



In the healthcare industry, previously inactive patient records may mean the difference between life and death in an emergency situation; following a natural disaster, insurance records will be needed quickly to handle claims; historical sales records are vital during a product recall.

ILM: A storage paradigm shift

Although the total value of stored information has increased overall, the value of individual data items can change over time. Infrequently accessed or inactive data can become suddenly valuable as events occur, or as new business initiatives or projects take hold. Historically, the need to retain information has resulted in a “buy more storage” mentality. However, this approach has only served to increase overall storage management costs and complexity, and has increased the demand for hard-to-find qualified personnel.

- *Help you make decisions about moving, retaining and deleting data, because ILM solutions are closely tied to applications.*
- *Manage information and determine how it should be managed based on content, rather than migrating data based on technical specifications. This approach can help result in more responsive management, and offers you the ability to retain or delete information in accordance with business rules.*
- *Provide the framework for a comprehensive enterprise content management strategy.*

Executives today are tasked with reducing overall spending while supporting an ever-increasing number of service and application demands. While support and management tasks increase, IT departments are being asked to justify their position by demonstrating business value to the enterprise. IT must also develop and enhance their infrastructure in order to support business initiatives while facing some or all of these data storage issues:

- *Costs associated with e-mail management can reduce employee productivity in many companies.*
- *Backup and recovery windows continue to expand as data volumes grow unmanaged.*
- *Inactive data consumes valuable, high-performance disk storage space.*
- *Duplicate data copies are consuming additional storage space.*
- *As data continues to grow and management costs increase, budgets continue to be under pressure.*

HSM	ILM
Manages only files	Manages structured, semi-structured and unstructured data from many sources in a heterogeneous, networked environment
Provides users with a limited set of metrics to dictate automated migration among storage tiers.	Application-centric and considers the information's value to the enterprise at the object level, using parameters such as business purpose, date of last access, information type, an event, a specific owner and other characteristics as defined by the application.
Migrates data based on technical specifications (based on age and, perhaps, size)	Examines information and determines how it should be managed, then migrates unused data off of more costly, high-performance disk.
HSM is a <i>product</i> .	ILM is a <i>process</i> that integrates a broad range of technologies including storage, database and security, combined with automated policy management.

ILM can help

The overall objectives of managing information with Information Lifecycle Management are to help reduce the total cost of ownership and help implement data retention and compliance policies.

In order to effectively implement ILM, users need to determine how information is created, how it ages, how it is modified, and when it can be deleted. ILM segments data according to value, which can help create an economical balance and sustainable strategy to align storage costs with businesses objectives and information value. The adoption of ILM technologies and processes turns that strategy into a business reality.

How ILM works

At its core, the process of ILM moves data up and down a path of tiered storage resources, including high-performance, high-capacity disk arrays, lower-cost disk arrays such as serial ATA (SATA), tape libraries and permanent archival media where appropriate. Yet ILM involves more than just data movement; it encompasses scheduled deletion and regulatory compliance as well. Because decisions about moving, retaining and deleting data are closely tied to application use of data, ILM solutions are usually closely tied to applications.

Information Lifecycle Management (ILM) and Hierarchical Storage Management (HSM)

IBM introduced hierarchical storage management (HSM) software to mainframes in 1974. Over the years, IBM has worked with its vast customer base to refine the original HSM concepts.

Gain understanding and control over your data value and business processes with ILM

ILM has the potential to provide the framework for a comprehensive, information-management strategy, and helps ensure that information is stored on the most cost-effective media. This helps enable administrators to make use of tiered and virtual storage, as well

as process automation. By migrating unused data off of more costly, high-performance disks, ILM is designed to help:

- *reduce costs to manage and retain data*
- *improve application performance*
- *reduce backup windows and ease system upgrades*
- *streamline data management*
- *allow the enterprise to respond to demand—in real-time*
- *support a sustainable storage management strategy*
- *scale as your business grows*

IBM ILM solutions

IBM has a history of data retention and management solutions, and is a leader in ILM solutions. ILM solutions make the best use of a tiered hierarchy of storage systems. IBM's disk systems (including midrange TotalStorage DS4000 and enterprise-class DS6000 and DS8000) and tape systems (including TotalStorage 3592 and LTO Generation 3, both with write-once read-many (WORM) capability) offer an outstanding range of options from which to build a hierarchy. For data retention solutions, the IBM TotalStorage DR550 complements this hierarchy with a complete system designed to deliver policy-based, non-erasable, non-rewriteable storage to help meet legislative compliance requirements.

ILM solutions require close integration with applications, so middleware systems such as IBM DB2® Content Manager, IBM DB2 Records Manager and IBM DB2 CommonStore are key components in IBM ILM solutions. At the same time, IBM's open approach to developing solutions recognizes the important role of independent software vendors (ISVs), which are also extensively involved in IBM solutions.

IBM solutions for ILM are grouped under five categories:

E-mail archive: Addresses one of the fastest-growing storage components for many companies. Solutions such as IBM DB2 CommonStore, VERITAS Enterprise Vault, OpenText-IXOS Livelink for Email Archiving, and ZAN-TAZ EAS are designed to reduce the size of corporate e-mail systems by moving e-mail attachments and/or messages to an archive from which they can easily be recovered if needed. This action helps reduce the need for end-user management of e-mail, improve the performance of e-mail systems and supports the retention and deletion of e-mail.



Application and database archive:

Similar in concept to e-mail archive, but instead deals with the growth of information in corporate databases such as ERP systems, and software such as Princeton Softech's Active Archive. It is designed to identify database data that's no longer being regularly accessed and move it to an archive where it remains available, if needed. Because applications can span multiple database systems and even multiple platforms. Active Archive can recognize related data from multiple systems and archive it together to help retain the integrity of the application. Database archive solutions can help improve performance for online databases, reduce backup times and improve application upgrade times.

Data lifecycle management: A variant of HSM. Provides movement of files up and down a tiered storage hierarchy based on factors such as age and size of data. IBM's TotalStorage SAN File System provides a data lifecycle management implementation and may be combined with IBM Tivoli® Storage Manager to add an archive capability.

Content management: Can be part of any ILM solution, and is designed to manage all types of information (database, e-mail, documents, images, etc.) within a common repository. By having related information in a single location, the information is easy to locate and protect. IBM's content management repository, DB2 Content Manager, receives information from many IBM and ISV products. Most content

management solutions are closely tied to applications because different data types have specific needs. Examples include insurance forms, test results for pharmaceuticals, and audio and video for digital media.

Retention management: Also can be a part of any ILM solution, and is frequently part of a content management system. Retention management helps an ILM solution protect information from deletion. A retention-management system, such as IBM DB2 Records Manager, working with DB2 Content Manager, helps provide this protection and also helps enable deletion of information that's no longer needed. Working together with these software products, the IBM TotalStorage DR550 completes a retention management environment.

A complete ILM package

IBM Global Services has the knowledge and expertise to assist you in all phases of an ILM implementation, including assessment, migration, integration and complete implementation. IBM also offers customer-managed services solutions, which enable ILM solution implementation while taking advantage of IBM's hosting centers.

Offerings are available for large enterprise customers, as well as the small- and medium-sized business market through IBM's Express portfolio of offerings. IBM's comprehensive approach to ILM provides customers with a solid foundation upon which to build and grow their ILM strategy.

For more information

For more information about IBM Information Lifecycle Management Solutions, please contact your IBM representative or IBM Business Partner, or visit:

ibm.com/storage/solutions



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