

## SAP Solution in Detail

SAP NetWeaver Information Lifecycle Management

# INFORMATION LIFECYCLE MANAGEMENT WITH SAP® SOFTWARE

REDUCING TOTAL COST OF OWNERSHIP AND BUSINESS RISK

With the SAP NetWeaver® Information Lifecycle Management component, you can streamline your IT infrastructure by decommissioning legacy systems and automating data retention management. You can archive noncurrent data in readily accessible formats and find it whenever you need it. The software preserves full auditing and reporting functionality on archived data, centrally manages and enforces rules-based retention policies (including legal holds) to minimize business risk, and gives you complete control over enterprise data management. At the same time, you can reduce database volume growth and associated data management costs.



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# THE GROWING COMPLEXITY OF INFORMATION MANAGEMENT

## LEVERAGING KEY DRIVERS FOR INVESTMENT IN ILM

### Tackling a Multifaceted Challenge

In recent years, information lifecycle management (ILM) has gone from being a mere buzzword to representing a solid strategy and concept with a clear definition that most IT professionals agree upon. Simply put, ILM means gaining complete control over what data you have and where it is located

Information lifecycle management means gaining complete control over what data you have and where it is located and automating the management of that data so that you comply with internal, external, and legal requirements for its retention and destruction.

and automating the management of that data so that you comply with internal, external, and legal requirements for its retention and destruction. This entails knowing what kind of data your company deals with, where it resides, how long it must be retained, and when it may or even must be destroyed. Once you know your data, you need adequate tools and solutions to manage it – move it to the optimal storage location, store it, access it again (for example, during an audit), and destroy it once the data retention period has expired.

This definition of ILM represents a movement away from a purely technological approach to data management. It's now widely recognized that it is impossible to manage data and information from the time it is "conceived" through its final disposition by only focusing on storage hardware and software. A large amount of information is born in application systems and lives there for some time before it can be moved to storage systems. And even when it has been moved to storage, the business application still "owns" and controls the data. So it is essential for applications and storage systems to communicate and be compatible. From SAP's perspective, it means that ILM must evolve to address more than just archiving. To this end, SAP's approach to ILM is built upon three cornerstones:

- **Data archiving and data management**, which focuses on data volume management. This is the traditional area of focus for information management, which has been supported by SAP® software for years.
- **Retention management**, which addresses end-of-life data using retention policy management and legal hold to help you control the retention of your data along its entire lifecycle
- **System decommissioning**, which covers end-of-life system management through the decommissioning of legacy systems and moving data into a central ILM system called the retention warehouse. This scenario also addresses methods for tax and other types of reporting on data from decommissioned systems.

Retention management and system decommissioning – the recent additions to SAP's approach to ILM – represent a major step toward more automation and completeness. Designed in constant dialogue with the ILM influence council at the Americas' SAP Users' Group (ASUG), SAP gained detailed customer insight into the challenges companies are facing in their ILM and legal compliance strategies. The new retention management and retention warehouse functions address these challenges, developed with a focus on enhancing or building on existing functionality to support nondisruptive innovation.

### Lifecycle of Data Processed by SAP® Software

Figure 1 shows the lifecycle of data created and processed by SAP® software and the frequency with which it is typically accessed over its lifetime. Data is only modifiable and relevant for everyday business for a short period of time. The largest portion of the data lifecycle is the retention period, during which the data has to be kept but is accessed very infrequently. After the time has passed that you are legally required to keep the data, it can be – and in some cases must be – destroyed.

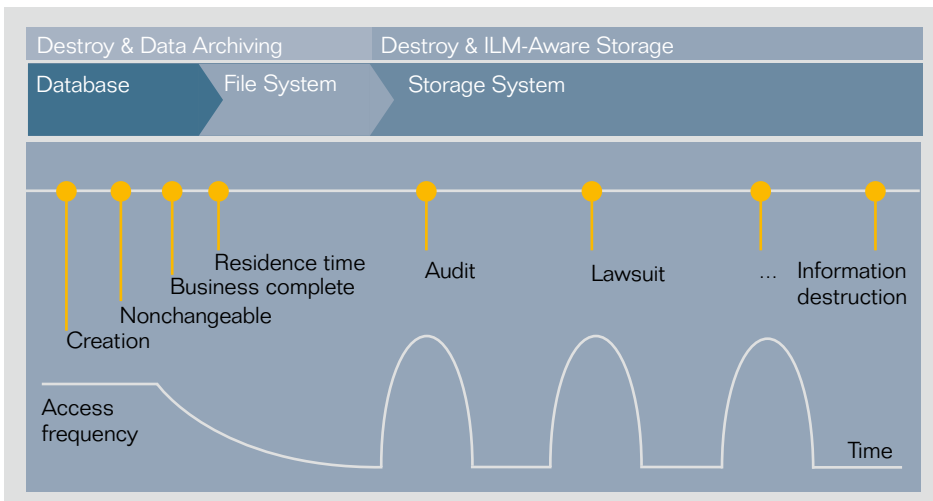


Figure 1: An Overview of the Data Lifecycle

## Why Focus on ILM?

Why the heightened focus on a holistic approach to information management today? Because companies of all sizes need to meet the demands of today's business world in part by getting a better handle on the increasing complexity of their IT system landscapes. The key drivers for ILM are diverse and continue to grow in complexity.

### Growth in IT System Complexity

IT system landscapes continue to grow in size and complexity due to factors such as mergers and acquisitions and sheer business growth. Maintaining multiple systems – many of which are likely redundant – and countless legacy systems is very costly in terms of hardware and IT maintenance personnel. Yet companies do it routinely; they feel compelled to keep old systems running so that they can continue to access the data contained in them for auditing, litigation, and reporting purposes or to access its business context.

### Growth in Regulatory Retention Requirements

Incidents such as the September 11 2001, attacks and the Enron upset have triggered a staggering proliferation of legal requirements that cover digital information. It is estimated that currently there are many thousands of regulations worldwide that mandate the maintenance of electronic data, and this number is continuously growing. Among them are the reworked e-discovery rules in the United States, which officially took effect in December 2006.

As a result of these changes and new laws, the value of information in an enterprise has risen considerably. In fact, for some companies, information is their single most important asset. At the same time, the complexities associated with managing this information based on its value has increased to such an extent that traditional data management strategies are no longer adequate. Laws are covering more and more data types and a growing number

of industries and countries – and in some cases for longer periods of time. It is not unheard of, in the German public sector, for example, to have legal retention periods of 100 years. These laws are expected to lead to an even greater increase in data volumes that will eventually nullify – and even reverse – cost savings attained through the falling cost of storage.

### Increase in Litigations

Companies are facing an increasing demand to present corporate information in courts during litigations. For many, just locating the information and ensuring it is protected from unauthorized access and adulteration during the duration of the lawsuit can be very costly and extraordinarily time consuming. The data required may be 10 years old, have been stored in a long-forgotten storage device along with other unrelated information, and exist in a format that can no longer be read by the company's software.

### Explosion in Business Data

Most companies now have a wide variety of enterprise applications that capture massive amounts of information about their customers and everyday business activities. These applications have resulted in the explosive growth of business data, all of which needs to be managed in a legally compliant manner both nationally and in accordance with the laws of any country where the organization conducts business. Keeping this amount of historical data accessible within the company's main database is costly and tends to degrade system performance.

# A COMPLETE ILM SOLUTION FROM SAP

## STREAMLINING YOUR IT INFRASTRUCTURE

The SAP NetWeaver® Information Lifecycle Management component enables you to streamline your IT infrastructure while preserving full auditing and reporting functionality for the data. The component also offers new rules-based enforcement of retention policies. Now you can decommission redundant systems but still audit and report on the data archived from those systems. At the same time, you can automatically manage the retention of the data from your SAP applications by applying specific retention policies and rules to the data, giving you complete control over data management.

Through support for archiving and data management optimization, SAP NetWeaver Information Lifecycle Management helps you reduce database

volume growth. You can archive non-current data in readily accessible formats and track exactly where data is so you can find it whenever you need it. In addition, you can find and preserve data for legal discovery – as the software allows you to compile data in response to legal discovery requests – and enforce the holds to restrict destruction of the data until a legal case is closed.

As summarized in the following table, the software supports all key phases of the information lifecycle.

### Enabling Nondisruptive Innovation and Extensibility

SAP NetWeaver Information Lifecycle Management offers new functionality

for more automated and comprehensive ILM support. While the traditional archiving tools provided with SAP applications provide basic support for your ILM strategy, SAP NetWeaver Information Lifecycle Management builds upon and extends this functionality. Because the software is tightly integrated with the traditional data management tools provided with SAP software, implementing SAP NetWeaver Information Lifecycle Management does not disrupt your current data archiving practices.

In the first versions of SAP NetWeaver Information Lifecycle Management, ILM support is available for SAP software. However, it was designed in such a way that it could be used as an infrastructure for ILM strategies for non-SAP software.

#### System Decommissioning

- Decommission legacy systems
- Enforce retention policies on data from shut-down systems
- Run reporting on data from shut-down systems
- Use a predefined business warehouse tax content and reporting interface
- Interpret and understand data in archives without the help of the original system

#### Retention Management

- Manage all retention policies across the enterprise
- Manage the responsible destruction of data based on policies
- Enforce retention policies
- Use secure ILM-aware storage
- Perform e-discovery rules and set legal holds

#### Data Archiving

- Analyze data volumes
- Securely move data from the database to the archive
- Efficiently access archived data
- Archive data (as near-line storage) within the SAP NetWeaver® Business Warehouse component

# DATA ARCHIVING: THE CORE OF THE SOLUTION

## ENHANCING ARCHIVING FUNCTIONALITY TO ADDRESS BROADER NEEDS

Data archiving is at the core of SAP NetWeaver Information Lifecycle Management – and the support for retention management and system decommissioning is built upon this functionality. If you have been archiving SAP software data for some time, you have a perfect foundation for a full-fledged ILM solution from SAP that can be implemented with minimal disruption to your business.

Data archiving means writing business-complete data from a database into archive files and then deleting the data from the database. The term “business complete” refers to data you no longer need to access on a regular basis and which will no longer be changed by current or future business transactions. Data archiving performed by SAP software handles structured data only – transactional or business data. It does not handle unstructured data, which includes document formats such as Adobe PDF or TIFF. In an SAP software environment, unstructured data is often produced as a result of scanning incoming or outgoing documents, such as invoices. This type of data is usually stored in optical archives and is distinct from the archive files created with archiving functionality provided by SAP NetWeaver Information Lifecycle Management. SAP NetWeaver Information Lifecycle Management does handle storage of unstructured data. Please refer to the “Retention Management” section below for details.

Figure 2 shows the steps involved in the data archiving performed by SAP software. Note that archiving data does

not remove the data from the system. Rather, it removes the data from the database connected to the SAP application. After data has been archived, it can still be accessed by the application until the data is permanently removed from the archive.

all of the database tables containing the data that makes up a particular archive object and must be archived in order to archive a complete object (for example, a sales order in the SAP software made up of many different components, including data

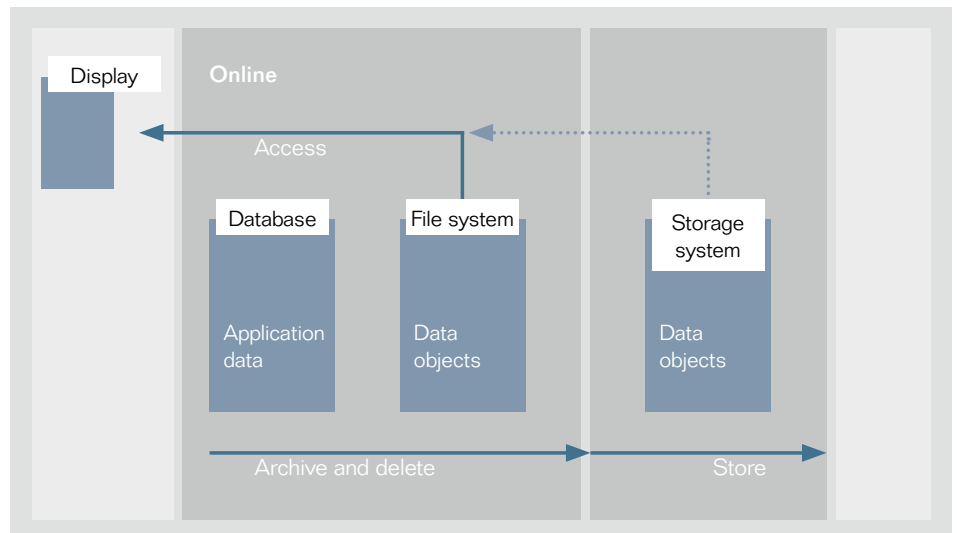


Figure 2: Overview of the Data Archiving Process

### Simplifying Archiving with Innovative Archive Objects

The archive object is one of the most valuable data archiving concepts in the SAP approach to ILM. Not only does it greatly simplify the archiving process, but it also lays the foundation for effective, automated data retention management and system decommissioning.

An archive object is a logical object of related business data that contains:

- **The definition of the logical units in business processes**, which include

residing in several different database tables)

- **The programs needed to archive its particular data** (primarily “write” programs used to archive the data in archive files and “delete” programs used to delete the data from the database)
- **The definition of the required customization settings for archiving that data** (for example, a financial document may have a mandatory residence time of three months in the database after the business process is complete)

For SAP NetWeaver Information Lifecycle Management, SAP has enabled archive objects in such a way that they integrate with the software's rules engine, where data retention rules are defined. This enables you to integrate rules into the archiving process so that they are automatically applied and enforced. It also makes the data available for:

- **The creation of snapshots** – which allows you to take a picture of live data without deleting it from the database
- **Data destruction** – which enables you to use an archive object to destroy a document from a system running SAP software

To understand the concept of archive objects more fully, consider the following example. When you archive sales orders, the data archiving programs need to archive data from all of the database tables that contain data relevant to this sales order and as required by various business processes spanning your organization in sales, finance, and other departments. The following table lists some of the typical database table names that the archiving software needs to access in order to fully and completely archive the data of the sales order. When you archive the related business data predefined in the archive object, the data is written from the database to archive files using the corresponding write program and then deleted from the database using the corresponding delete program.

#### Example: Archive Object SD\_VBAK – Sales Orders

Technical Name of Database Table	Table Name
AUSP	Characteristic Values
CMFK	Storage Structure for the Error Log Header
CMFP	Storage Structure for Errors Collected
FMSU	FI-FM Totals Records
FPLA	Billing Plan
FPLT	Billing Plan: Dates
INOBO	Link Between Internal Number and Object
JCDO	Change Documents for Status Object (Table JSTO)
JCDS	Change Documents for System/User Statutes (Table JEST)
JEST	Object Status
JSTO	Status Object Information
KANZ	Assignment of Sales Order Items – Costing Objects
KEKO	Product Costing – Header
KEPH	Product Costing: Cost Components for Cost of Goods Manufactured
KNKO	Assignment of a Cost. Est. Number to Configured Object
KOCLU	Cluster for Conditions in Purchasing and Sales
KSSK	Allocation Table: Object to Class
NAST	Message Status
SADR	Address Management: Company Data
VBAK	Sales Documents: Header Data
VBAP	Sales Documents: Item Data
VBEH	Schedule Line History
VBEP	Sales Document: Schedule Line Data
VBEX	SD Document: Export Control: Data at Item Level
VBFCL	Sales Document Flow Cluster
VBLB	Sales Document: Release Order Data
VBSN	Change Status Relating to Scheduling Agreements
VBUK	Sales Document: Header Status and Administrative Data
VBUP	Sales Document: Item Status
VBUV	Sales Document: Incompleteness Log
VEDA	Contract Data

SAP offers hundreds of archive objects and classes that you can choose from – and the most common archive objects are currently enabled for ILM, especially in the areas of financials and tax.

# RETENTION MANAGEMENT

## MINIMIZING RISK BY PROACTIVELY MANAGING DATA RETENTION

The groundwork for every successful ILM strategy begins not only with the technical identification of business objects in the SAP software but also with a comprehensive inventory of the policies and regulations that are specific to each organization. Data retention policies lay out exactly which data must be kept for how long and where it should be kept (for example, online or in some kind of a storage system). They may vary for a single piece of data – for example, different countries have different laws and legal requirements that have to be taken into consideration.

Most large U.S. and global companies already have some type of policy regarding the retention of paper documents and electronic documents and data, as well as additional retention policies required by their legal department, such as legal hold orders. However, due to the complexity and number of laws worldwide that govern the retention of data, complying with these policies can be challenging.

SAP NetWeaver Information Lifecycle Management delivers retention management functionality for managing all aspects of retaining data based on legal requirements. This functionality supports retention policy management, ILM-aware storage integration, and the management of the destruction of data. In addition, it delivers tools for dealing with e-discovery and legal hold rules.

### An Overview of Retention Management Functionality

The information retention management functionality available through SAP NetWeaver Information Lifecycle Management enables you to manage internal and external policies in a flexible, comprehensive, and automated way. You can enter rules and policies based on different criteria, including how long data should be kept, the starting point from which retention time counts, and the storage location where it should be stored. These policies can express external legal requirements or internal service-level agreements. They can cover structured and unstructured data (from both SAP and non-SAP software) and even paper documents that are linked to the data and stored in an enterprise data warehouse. Data can have its own policies and rules, or it can inherit policies from other superordinate data (for example, a scanned-in check can inherit the policies of the financial document it belongs to).

To give you maximum flexibility in the creation of policies, the software enables you to group data into policy types and object types. For example, you would group accounting documents under the policy type “tax” and as part of the object type “FI\_DOCUMNT.” You would then create a policy for a specific policy type. In this case, you would create a policy under the policy type “tax” for object type “FI\_DOCUMNT.” Once the policy is created, you can enter rules that enable you to determine how long and where the data is to be stored – variables specified by tax laws you must comply with. You can enter as many rules as you need per policy. You also have the flexibility to determine who is allowed to enter or change policies and rules. You can establish, for example, that only one person from the finance department may enter or change rules for the “tax” policy type.

You can use this same rules database to record data retention policies for data outside of your system (for example, a policy on how long to retain certain paper documents). While the software cannot enforce the policies for information outside of the SAP software, it does provide a central location where you can keep track of all data retention rules. The automatic enforcement of the rules takes place on data from the SAP software at the time of archiving.

To enable efficient, effective information lifecycle management, SAP has enhanced archive objects to allow for the integration of rules in the archiving process. This allows you to manage retention requirements dictated by internal business processes, apply end-of-life data policies, and consistently execute a data retention schedule that meets external legal requirements. These requirements are often dictated by laws and regulations, such as the Sarbanes-Oxley Act or the Health Insurance Portability and Accountability Act (HIPAA), and determine:

- How long you have to hold on to data – a question of data retention
- When data needs to be destroyed – a question regarding the end of life of your data

#### Archiving and Destruction

Due to its flexibility, SAP NetWeaver Information Lifecycle Management is the ideal software to help you store and manage all of your company's retention rules, as well as enforce them for the data generated within SAP software. By helping you manage data by enforcing rules automatically, the software clearly demonstrates its value. For example, SAP has enhanced the functionality of archive objects to enable

you to apply retention rules to data within SAP Business Suite software at the time of archiving so that, going forward, these rules are applied and enforced without human intervention – unless overridden by a legal hold. The write program selection screen for an ILM-enhanced archive object, as delivered by the software, provides

**SAP's approach to information lifecycle management is built upon three cornerstones: data archiving and data management, retention management, and system decommissioning.**

you with three different ILM actions: archiving, snapshot, and data destruction. You simply select the option that's appropriate for what you need to accomplish from a data retention perspective.

#### Archive Option

The archiving functionality within SAP NetWeaver Information Lifecycle Management allows you to archive business-complete data. The software runs an "archivability" check to ensure that an object really is business complete. During the write archiving phase, the software checks the retention management rules for each object instance to determine how long it should be stored and where. Based on the rules, the software writes the data to an archive file, organizing the archived data based on the rules you specified in SAP NetWeaver Information Lifecycle Management.

If you have already archived data and have archive files from previous archive runs, the SAP NetWeaver® Information Lifecycle Management component allows you to convert these old files and data, adapting them to fit into your new information lifecycle management environment. When you convert the files, you obtain new files containing exact copies of the old instances but sorted according to the rules you defined in the software.

### Snapshot Option

You can take a snapshot of data using SAP NetWeaver Information Lifecycle Management to copy data from open business processes to the archive. Because this option is intended for data from open business processes (data that is not to be deleted from the database), the software does not perform an archivability check on the data. This functionality complements the standard functionality for archiving business-complete data. In the archive, the snapshot is kept separate from the business-complete data.

### Destroy Option

When you choose to destroy data, the software does not run an archivability check. It checks the retention rules you entered for the archive object. The data that can be destroyed immediately is written to an archive file. (The destroy option takes legal holds into account; if a legal hold has been placed on any data or document, destruction does not take place.) The transparency of this operation is of great benefit to you. Not only does it help ensure consistent handling of data destruction for online data, but it also supports you in case of an audit (for example, by generating logs that allow you to prove what data was destroyed during archive runs). After the data to be destroyed is removed from the database, the delete program deletes the archive file from the file system (so the archived data is never stored).

### Automated E-Discovery

Companies today are dealing with legal hold and e-discovery requirements more and more – especially in the United States – because of recent changes to the e-discovery law that went into effect in 2006. The legal case management functionality within SAP NetWeaver Information Lifecycle Management allows you to set up legal cases and manage all information related to each case. E-discovery functions help you collect all of the information relevant to a specific case. In a complex, distributed IT environment, this isn't always easy. The new retention management functionality available through SAP NetWeaver Information Lifecycle Management enables you to do this – either automatically or manually.

E-discovery is facilitated by special reports connected to a legal case. The software delivers sample e-discovery reports that can be used directly or as a customizable template for the special reports you need to generate for cases. For all objects discovered and associated with a case, you can set a legal hold as required for the case.

### Legal Hold

Legal holds are “freezes” placed on information and data that are (or could be) involved in a legal case and were gathered during the e-discovery phase. This means that even though the retention period for certain data may have already expired (and, as a result, is due to be destroyed), it must be retained until the legal proceedings have been completed.



You can even manage multiple legal holds for different cases on the same data. Once a legal hold has been placed on a specific document or group of documents, all other policies and rules for that document are overridden until the legal hold has been lifted. This ensures that no document – either in the database or the archive – is destroyed until all legal proceedings have ended or the case has been closed.

### Management of Unstructured Data

You can also manage the retention of the unstructured data that is attached to the structured data managed by SAP NetWeaver Information Lifecycle Management. You store the attached, unstructured data in a storage system using SAP ArchiveLink® software.

The references to the locations of the unstructured data are then stored in a second hierarchy that corresponds to that of the structured data. The location of each unstructured document is stored in the corresponding collection in a hierarchy that mirrors its hosting archived business object (see Figure 3). This way, the unstructured data appears close to its corresponding structured data and inherits the same lifecycle metadata.

Even though unstructured data is stored using a different interface than the structured data, both can be stored in the same storage system if the system supports both interfaces.

### ILM-Aware Storage Integration

SAP recognizes that an ILM strategy is only complete when both the application and storage aspects of information management are taken into consideration. That's why an essential part of retention management functionality within SAP NetWeaver Information Lifecycle Management is ILM-aware storage integration that's based on secure storage technology.

With SAP NetWeaver Information Lifecycle Management, the lifecycle actions that occur with your SAP software data are based on the policies you enter into the rules engine. As data is moved to the archive, metadata is simultaneously passed on as WebDAV<sup>1</sup> properties. This metadata needs to be accepted, understood, and enforced

by the third-party storage system – functionality referred to by SAP as ILM-aware storage. Storage vendors can obtain an ILM certification from SAP to show that their storage systems are ILM aware.

### Choosing the Right Storage Partner

At SAP, we believe that a holistic approach is indispensable when implementing an ILM strategy. For example, you need to ensure that data retention and destruction rules managed within SAP NetWeaver Information Lifecycle Management can be mapped to the archived data, which is held in a third-party storage environment. This means that application vendors like SAP must form close ties with storage vendors. SAP has been extremely active in this area and has, among other things, set up partner certification programs for data archiving and enabling ILM-aware storage.

When you are choosing a storage system to support your ILM strategy, it is also important to check whether it meets certain criteria. For example, it should support both the “nondeletability” as well as the destruction of data upon request functions. This will ensure that your data is kept for the entire retention period required by law and then destroyed at the correct time.

Another important factor to consider is whether the storage system enables you to reduce redundancy as much as possible. A storage system should also be able to guarantee that stored data cannot be changed or modified in any way. From our experience, WORM-like<sup>2</sup> magnetic storage technology is best suited for an ILM solution.

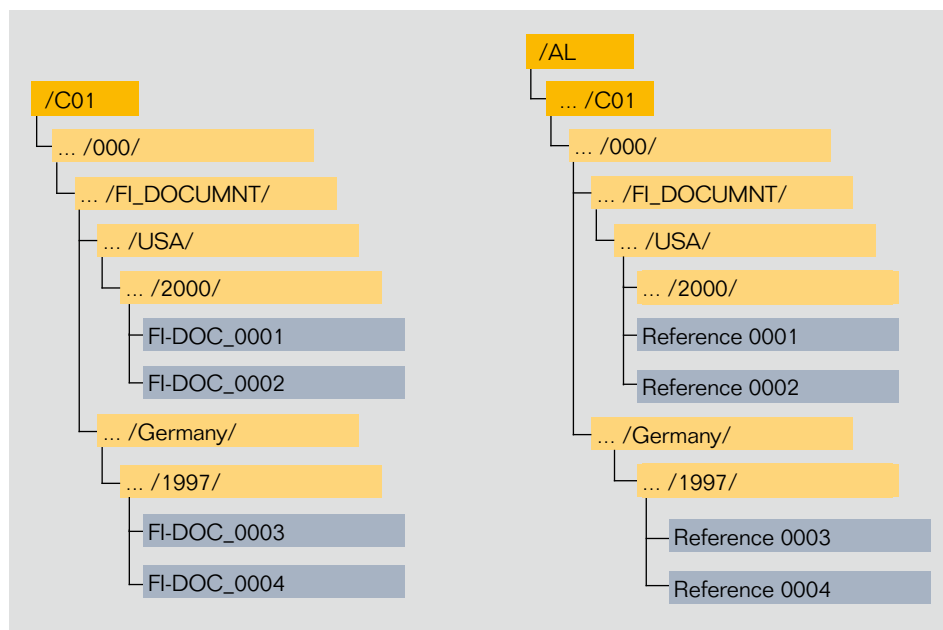


Figure 3: Sample Archive Hierarchy for Structured and Unstructured Data

1. World Wide Web Distributed Authoring and Versioning.  
 2. That is, like write-once, read-many technology.



# SYSTEM DECOMMISSIONING

## ENSURING LEGAL COMPLIANCE EVERY STEP OF THE WAY

IT system landscapes continue to grow in size and complexity due to factors such as mergers and acquisitions and sheer business growth. Maintaining multiple systems – many of which are likely redundant – and countless legacy systems is very costly in terms of hardware and IT maintenance personnel.

It's not uncommon for large companies to have hundreds of legacy systems they need to decommission. In the current economic climate, nobody can afford to keep a whole fleet of expensive legacy systems just to keep their legacy applications up and running. Old legacy systems incur unnecessary costs, not only in terms of hardware and maintenance but also from a sustainability perspective. Old systems are inefficient and consume unnecessary energy for operations and cooling. In addition, legacy systems reduce the efficiency of recurring operations, such as system backups, and tend to be risky because they become increasingly unreliable.

Until now, there has not been a standardized solution to deal with what can be the daunting task of system decommissioning. Many companies are afraid to shut down their legacy SAP software because they are unsure how to deal with legal requirements on the data from that software. Major questions they need to resolve include:

- How to ensure legal compliance for the decommissioned data
- How to continue to leverage the value of the information without keeping the original system alive and incurring the associated costs

SAP NetWeaver Information Lifecycle Management gives you a standardized way to decommission legacy SAP software and allows you to continue to use the archived data for auditing and reporting purposes, even though the original system has been shut down. Specifically, it enables you to:

- Decommission several large legacy systems into a single, lean ILM system, called the central retention warehouse
- Reuse the archived data outside the original system in the central retention warehouse
- Continue to apply and enforce retention policies and parameters to the data moved to the central retention warehouse

### The Central Retention Warehouse: A Closer Look

In a typical decommissioning scenario, you have a system that will be shut down and a central retention warehouse system that will receive the data you want to retain from the original system. The central retention warehouse consists of:

- A dedicated, "lean" SAP ERP application running SAP NetWeaver Information Lifecycle Management
- An attached, dedicated business warehouse software product from SAP
- Third-party ILM-certified storage hardware



## What Is a “Lean” SAP® ERP Application in an ILM Context?

A “lean” SAP® ERP application is a standard SAP ERP application that is not used as the company’s live enterprise resource planning (ERP) software. It either has no or very few logged-in users, and its database contains very little data. This lean application runs solely to serve the data in the archive and contains information lifecycle management functionality. It has very limited hardware requirements and, as a result, can be installed at minimum cost.

Because SAP NetWeaver Information Lifecycle Management is an integral part of the retention warehouse, data from decommissioned systems is covered by the retention policies you define and manage using the software. This means that retention times and legal holds apply to the data maintained in the central retention warehouse, just as they do for nondecommissioned (or live) systems.

The system that is to be shut down is first emptied of its data using standard and ILM-enhanced archive objects and programs. You can archive all the business-complete data and then use snapshot functionality to archive data from objects that are not yet business complete as well as any related context data.

### For the Legacy System

- Analyze the system
- Prepare the legacy system for shutdown
- Archive context data
- Archive data
- Conduct testing and quality assurance
- Move archived data to the retention warehouse system

## A Typical Scenario

For a given decommissioning project, there are multiple steps that can be roughly grouped into two categories, as summarized in the following table. Each of these steps is fully supported by SAP NetWeaver Information Lifecycle Management and additional services offered by SAP.

### Analyze the Legacy System

It’s not uncommon for IT departments to have limited knowledge of their legacy systems, particularly with respect to the amount and types of data they contain. If you don’t know what your legacy system “looks” like, you have the option of either moving everything over to the retention warehouse system, or you can run an analysis of your system

### For the Central Retention Warehouse

- Install a lean SAP® ERP application
- Set up policies and rules
- Convert the archive files and apply rules
- Generate business warehouse queries using archived data

and only move the specific data you will need later for auditing and reporting purposes – which is the recommended approach. The system analysis, which is usually performed before the project is set up, should cover the following types of SAP software data:

- Transaction data: Determine which data can be archived using traditional archive objects. If there is data without an archive object, you can remove it from the system using the context data extractor functionality.
- Master data: Master data needs to be kept for as long as transactional data exists, so it should be archived using the snapshot option.

### Legacy System Analysis Services from SAP

SAP offers ILM services, such as an analysis that examines system characteristics, analyzes all filled database tables, determines the application components in use, lists all company codes and document numbers, and identifies the application components for which archiving has already taken place. This analysis helps you decide whether the data in each database table should be moved to the retention warehouse and, if so, how that data should be moved.

- Customization information: Customization information can be extracted to the retention warehouse system using the context data extractor functionality.
- Already-archived data: Determine if you will need to access this data after the original system has been shut down. If yes, you can migrate it to the new data retention warehouse system and then use a special ILM file conversion function so that retention rules can be applied to it.

### Enable the Legacy System for Archiving

Once you have identified the data you need to retain and the tools you need to retain it, you can enable the legacy system for archiving. Since SAP NetWeaver Information Lifecycle Management is delivered in the newest release of the SAP ERP application, your legacy system has to receive the necessary ILM functions through the SAP Notes tool. This includes enhancements for archive objects, snapshot functionality, and the context data extractor functionality for the data not covered by archive objects. The context data extractor is preconfigured and covers the current scope necessary for tax reporting. For example, it is preconfigured to archive the context data needed to interpret the data involved in tax reporting.

### Set Up the Central Retention Warehouse

After preparing your legacy system to be shut down, you can set up the central retention warehouse to receive the data from the system you want to decommission. Your lean SAP ERP application should be set up and connected to a third-party storage system, which should be an ILM-certified product. (To find an ILM-certified partner, visit [www.sdn.sap.com/irj/sdn/interface-certifications](http://www.sdn.sap.com/irj/sdn/interface-certifications).) In addition, you need to connect a business warehouse software product from SAP. We recommend that you use dedicated business warehouse software for your data retention warehouse.

### Extract Data from Legacy Systems

Once the legacy system and central retention warehouse are prepared, you can extract the data from the legacy system using the functionality you implemented via SAP Notes – specifically, the enhanced-ILM archiving functionality, such as the snapshot option (one of the archiving options) and the context data extractor functionality. After you have “emptied” out the legacy system and moved data to the central retention warehouse, you can shut the legacy system down.

### Leverage Snapshot Functionality

The snapshot functionality is one of the ILM enhancements that is added to individual archive objects. It is a first step toward helping you retain all necessary data. This functionality complements the standard functionality used to archive business-complete data, as it allows you to copy data from open business processes to the archive as well. This data is kept separate from the archived data in the central retention warehouse. The snapshots also provide a solid basis for system decommissioning projects. For these projects to be complete, you have to move data from open business trans-

The context data extraction functionality provided by the SAP NetWeaver® Information Lifecycle Management component is preconfigured to cover information defined as “retention relevant” for tax reasons and covers the scope necessary for tax reporting. If you must cover additional database tables and data, you will have to adapt the customization settings in the software. As professional assistance is recommended for this work, SAP offers a service to adjust the settings of the context data extractor for you.

actions to the retention warehouse – something that was not possible before snapshot functionality was available.

### Leverage Context Data Extraction Functionality

After moving all business-complete and business-incomplete transactional data out of the system to be decommissioned, you need to enrich the archive with context information. To achieve this, you can use context data extraction functions provided by SAP NetWeaver Information Lifecycle Management to move complete customization and master data – as well as information not covered by the archive objects – to the archive. You can decide on a table-by-table basis what information you want to retain. To facilitate the selection of relevant tables, SAP NetWeaver Information Lifecycle Management delivers preconfigured programs as part of the context data extractor to cover information defined as “retention relevant” for tax reasons.

### Apply the Rules

SAP NetWeaver Information Lifecycle Management enables you to set up and define the data retention policies and rules within the central retention warehouse and then apply these rules to the archived data. These rules, which see

to it that data is kept in a legally compliant manner, are enforced by the software until the data reaches its assigned expiration date (barring a legal hold on the data).

Because the legacy system is an older release, it only contains the ILM functionality you introduced via SAP Notes. The retention warehouse contains the complete ILM functionality, including the policy engine. This means you can create the rules in the retention warehouse and apply them to the already archived and transferred data from the legacy system through an additional ILM file conversion step.

During ILM file conversion, the archive files you created and transferred from the legacy system are opened up and reorganized into new archive files based on the retention rules. The rules also control the way the archive files are organized in a hierarchy in the ILM-aware storage system. The hierarchy is constructed automatically based on the rules, and each folder in the hierarchy reflects a part of the rule. For example, if you have an accounting document (covered by the information retention manager object FI\_DOCUMNT) from system B00, client 100, from 1997, which needs to be kept for 10 years, then it would be stored in a hierarchy that reflects these rules (see Figure 4).

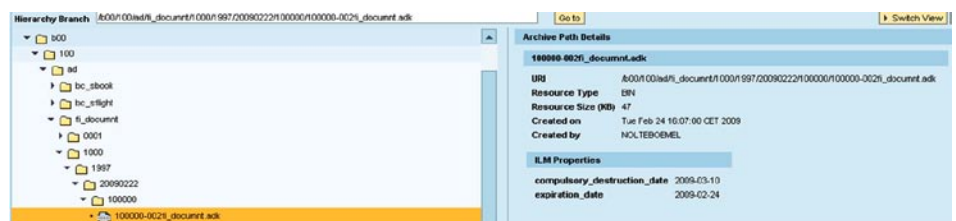


Figure 4: Hierarchy of Archive Files

The expiration date is calculated based on the criteria entered in the rule and attached to each accounting document as a property. For accounting documents, the basis for calculating the expiration date might be the end of the fiscal year or the last change date.

#### Generate Reporting for an Imminent Audit

In the event of an audit, SAP NetWeaver Information Lifecycle Management makes it possible to readily generate the reports you need. The software enables you to define audit areas based on your specific needs. An audit area determines which data should be

extracted from the archive stores and enables you to create groups of data that are logically related. You can define as many audit areas as you need, and, once created, they can be reused as often as necessary.

The data selection process takes place through an intermediary “work package” function that helps you prepare the business warehouse structures, define the selected data, and upload it to the data retention warehouse. You select both the data and snapshots – which provide contextual information to interpret the data – from the archive and temporarily copy it to the enterprise business warehouse. You can define the data set you want to view in the audit by a variety of selection criteria, including a time window. This allows you to define precisely what data is temporarily copied into the business warehouse for reporting.

Based on the audit area and the work package you have defined, the data model in the business warehouse is automatically generated. All you need to do is upload the data into the business warehouse when you are ready for reporting. As the data is loaded directly into the different information providers or elements of the business warehouse, you can display the results of queries using the different reporting front ends, including the Crystal Reports® family of offerings.

#### The Benefits of Decommissioning with SAP Software

One of the biggest advantages of using SAP NetWeaver Information Lifecycle Management is that you can decommission several legacy systems, which are usually large and inefficient systems, into a single, lean retention warehouse. This allows you to drastically reduce the total cost of ownership for your IT landscape and achieve a quick ROI that tends to improve as you decommission additional systems. For the first project, you have the one-time cost of setting up the central retention warehouse as well as the learning curve of implementing a project like this. With each additional system you shut down, your costs decrease. After the sixth system is decommissioned, SAP estimates you can achieve an ROI within less than six months.

You also benefit from comprehensive reporting functions that arm you to handle internal and external audits with far less time, effort, and cost. At the same time, you can substantially reduce risk through automated legal compliance with external requirements.

#### A Preconfigured Tax Audit Area

As part of information lifecycle management, SAP offers preconfigured content for the audit area “tax.” This content contains the complete definition of the audit area as well as the business intelligence (BI) content necessary for tax audits and reporting. This means that the BI content contains the most important queries and reports for a tax audit and can be configured with relatively little time and effort.

## FOR MORE INFORMATION

### GETTING STARTED ON YOUR ILM JOURNEY

ILM represents a change in thinking – a new mind-set regarding information management that needs to become a priority for all employees. In fact, it represents an evolution affecting the entire information management industry.

But implementing ILM is a gradual process – not something that can be done overnight. How can you get started? One good way is by decommissioning a legacy system, which delivers quick ROI in terms of lower IT costs. It also gives you the opportunity to learn the decommissioning process, test out best practices, and get started on defining your retention rules. You'll find that after the first project, decommissioning gets easier – and more cost-effective – with each subsequent project.

Alternatively, if you are just getting started with your archiving strategy, SAP experts suggest that you invest in a full ILM solution from day one, as you can lay the groundwork for a comprehensive solution that will give you far better control over data going forward.

For more information about how SAP can help you, please call your SAP representative or visit us at [www.sap.com/ilm](http://www.sap.com/ilm).



One of the biggest advantages of using the SAP NetWeaver Information Lifecycle Management component is that you can decommission several legacy systems, which are usually large and inefficient systems, into a single, lean retention warehouse. This allows you to drastically reduce the total cost of ownership for your IT landscape.



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## Summary

The SAP NetWeaver® Information Lifecycle Management component helps you streamline your IT infrastructure by simplifying legacy system decommissioning and automating data retention management. You can archive data in accessible and searchable formats. And auditing and reporting functions for archived data and central management and enforcement of rules-based retention policies helps you minimize business risk, reduce costs, and increase control.

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## Business Challenges

- Growth in IT system complexity
- Increase in the number and complexity of regulatory retention requirements
- Increase in litigations requiring legal holds on data
- Explosion in business data and associated IT costs

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## Key Features

- **System decommissioning** – Decommission legacy systems, enforce retention policies on data from shut-down systems, run reports on data, use a predefined business warehouse tax content and reporting interface, and interpret and understand data in archives without the help of the original system
- **Retention management** – Manage and enforce all retention policies across the enterprise, destroy data based on policies, use secure ILM-aware storage, perform e-discovery rules, and set legal holds
- **Data archiving** – Analyze data volumes, securely move data from database to archive, and efficiently access archived data

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## Business Benefits

- **Streamlined IT infrastructure and lowered costs** by enabling you to safely and efficiently decommission redundant systems
- **Reduced risk** by delivering full auditing and reporting functionality and rules-based enforcement of retention policies and preventing destruction of important data
- **Easier legal compliance** by automatically managing the retention of data from your SAP® applications based on retention policies and rules you define

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## For More Information

For more information about SAP NetWeaver Information Lifecycle Management, contact your SAP representative or visit [www.sap.com/ilm](http://www.sap.com/ilm).

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