SAP Archiving Techniques and Tools to Save Infrastructure Operating Costs without Compromising Data Retention for Legal Requirements

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Abstract

In the ever-evolving world of enterprise resource planning (ERP), businesses using SAP systems face significant challenges in managing large volumes of data efficiently. With the growing amount of business-critical data, SAP systems must adhere to strict legal and regulatory data retention requirements. Archiving techniques and tools become pivotal for managing the lifecycle of this data, ensuring that infrastructure operating costs are minimized while meeting compliance standards. This paper discusses various SAP archiving techniques, tools, and best practices for data retention, highlighting solutions that help organizations reduce their infrastructure operating costs without compromising on compliance with legal and regulatory requirements.

Keywords: SAP Archiving, Data Retention, Compliance, Legal Requirements, Infrastructure Costs, SAP Information Lifecycle Management, Data Storage Optimization

Introduction

In regulated industries such as finance, healthcare, and manufacturing, organizations must adhere to strict data retention policies to comply with legal and regulatory frameworks. Balancing these compliance needs with the desire to optimize infrastructure costs presents a challenge, which can be addressed through SAP archiving techniques and tools.

SAP Archiving Overview

SAP archiving is a process that involves the extraction and storage of data from SAP systems to an archive for long-term retention. The key objectives of archiving are to optimize system performance, reduce data storage costs, and ensure compliance with data retention policies. SAP's archiving solutions are designed to meet the unique requirements of each business, ensuring that data is retained for the necessary timeframes while also ensuring its secure storage.

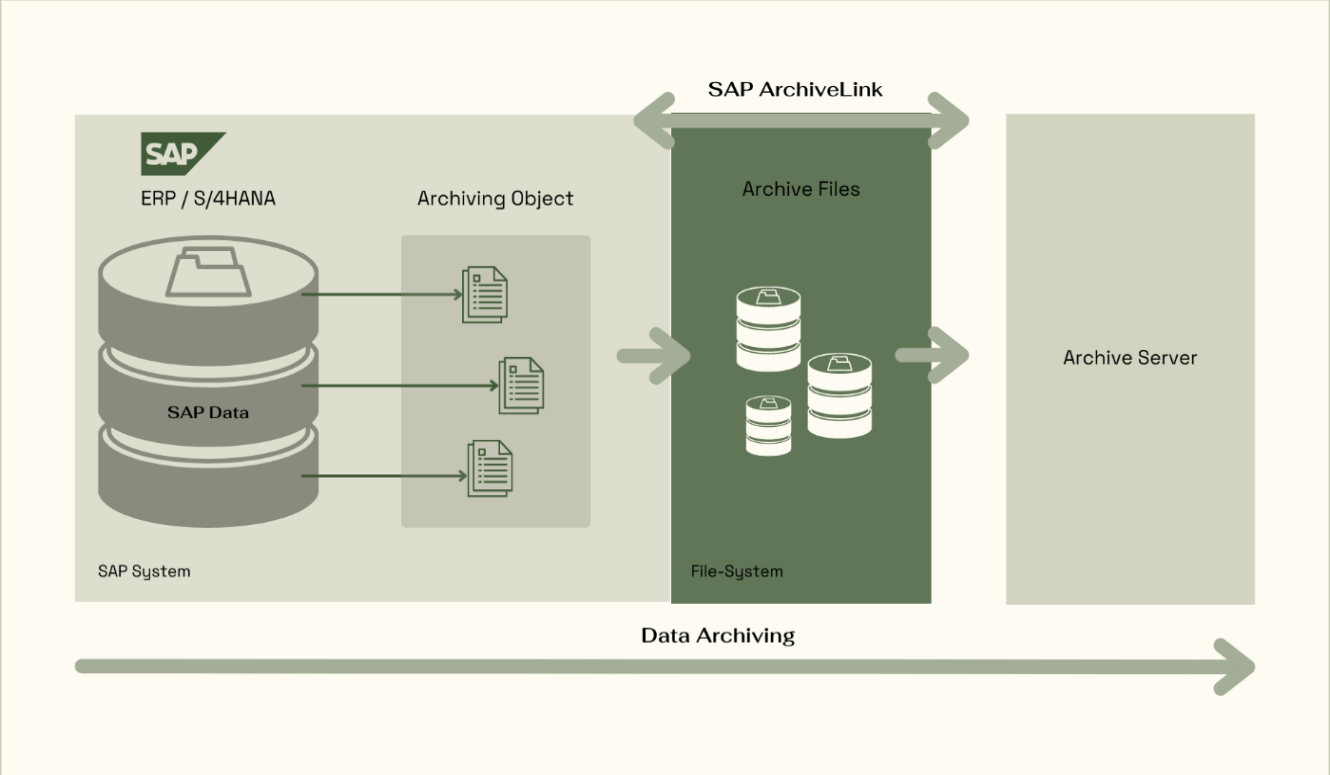

Fig1. Data Archiving: Extracting retired data to compliance proof archive server

Data Retention and Legal Requirements

Each industry has its own set of regulatory and legal frameworks that dictate how long data must be retained. For example:

Financial Services: Under the Sarbanes-Oxley Act (SOX), data must be stored for at least seven years.

Healthcare: The Health Insurance Portability and Accountability Act (HIPAA) mandates retention of patient records for up to six years.

European Union: Under the General Data Protection Regulation (GDPR), organizations are required to retain personal data only for as long as necessary.

SAP Archiving Techniques

SAP provides several techniques and approaches for archiving data, each suited to specific business needs.

SAP Data Archiving

SAP Data Archiving involves moving data from the SAP database to an external storage system, typically through the SAP Archive Development Kit (ADK). This tool enables the storage of data in a non-production system, allowing organizations to free up valuable space on their production servers while ensuring that archived data remains accessible.

SAP Information Lifecycle Management (ILM)

SAP ILM is an integrated solution that automates the management of data throughout its lifecycle. ILM helps organizations efficiently archive, retain, and delete data in compliance with legal and business requirements. It provides:

Retention Management: Ensures that data is retained for the required period and is deleted when no longer needed.

Legal Hold: Prevents the deletion of data that might be required for ongoing legal processes or audits.

Audit Trail: Provides a traceable record of actions performed on archived data to comply with legal requirements.

SAP ILM is particularly beneficial for businesses in highly regulated industries, offering a robust solution for managing compliance and reducing storage costs.

Data Tiering with SAP HANA

In addition to traditional archiving, organizations leveraging SAP HANA may utilize data tiering techniques. SAP HANA allows organizations to store "hot," "warm," and "cold" data on different storage tiers:

Hot Data: Frequently accessed, mission-critical data that resides in high-performance memory.

Warm Data: Data that is accessed less frequently but still needs to be readily available.

Cold Data: Data that is rarely accessed but still needed for compliance, archived to low-cost storage solutions.

This tiered approach helps reduce infrastructure costs while ensuring compliance with data retention regulations.

Tools for SAP Archiving and Data Retention

SAP Archive Development Kit (ADK)

The SAP Archive Development Kit (ADK) is one of the most widely used tools for data archiving within SAP systems. ADK allows users to define archiving objects, which are customized data models that specify which data to archive and when. The ADK facilitates the extraction of data from the SAP database and the creation of archive files that can be stored externally. ADK is used in conjunction with other SAP tools like the Data Archiving Workbench to automate the archiving process and ensure compliance with regulatory requirements.

SAP Extended Enterprise Content Management (SAP Extended ECM)

SAP Extended ECM is an integrated solution that combines enterprise content management with SAP processes. This tool offers document management capabilities that help businesses archive documents, ensuring that they comply with legal retention requirements. By managing the storage of documents in a way that aligns with business processes, SAP Extended ECM helps companies reduce costs while meeting regulatory mandates.

Near-Line Storage (NLS)

Near-Line Storage (NLS) is a tool that facilitates the storage of data that is infrequently accessed but still needs to be readily available. NLS offers a compromise between online storage and offline storage, making it an effective solution for long-term retention of large volumes of data. NLS is typically used in conjunction with SAP's archiving solutions to store historical data while minimizing the load on production systems. NLS is a cost-effective solution that can be utilized for archived data, ensuring compliance with legal retention periods without overloading the primary SAP infrastructure.

Cloud Storage Solutions for SAP

Cloud storage has emerged as a popular solution for SAP archiving. Many organizations are moving to cloud platforms such as SAP Cloud Platform or third-party providers like Amazon Web Services (AWS) or Microsoft Azure. Cloud storage offers several advantages:

Scalability: Cloud solutions can grow with the organization's needs, eliminating the need for costly on-premise infrastructure.

Cost-effectiveness: Pay-as-you-go models allow businesses to pay for only the storage they need.

Security and Compliance: Cloud providers offer advanced security measures and comply with industry regulations, ensuring that data is safely archived while meeting legal requirements.

Cloud solutions are particularly suitable for organizations looking to reduce their on-premise storage footprint while ensuring that archived data remains accessible and compliant.

Third-Party SAP Archiving Tools

In addition to SAP's native archiving tools, there are several third-party tools that can be used for SAP data archiving. These tools often provide additional features and flexibility, making them suitable for various business needs. Below are some notable third-party SAP archiving tools:

Tool	Overview	Strengths	Limitations
OpenText	OpenText offers a comprehensive suite of archiving solutions that integrate seamlessly with SAP systems.	- Deep integration with SAP for both data and document archiving. - Strong compliance features to meet regulatory requirements.	- Can be expensive, especially for smaller organizations. - May require significant setup and configuration.
Solix Cloud Data Management for SAP	Solix provides cloud-based data management solutions that include archiving, data masking, and data governance.	- Offers the flexibility and scalability of cloud storage. - Comprehensive data governance features. - Pay-as-you-go pricing model.	- Requires reliance on cloud infrastructure. - May require additional integration efforts.
ArchiveHub.io	ArchiveHub.io offers tools for data extraction, reporting, and archiving for SAP systems.	- Strong reporting and data visualization capabilities. - Easy to use with a focus on user experience. - Supports various data extraction and archiving scenarios.	- Primarily focused on reporting and data extraction. - May not be suitable for very large datasets.

Tool	Overview	Strengths	Limitations
PBS Software	PBS Software provides solutions for data archiving, data extraction, and system decommissioning.	- Seamless integration with SAP environments. - Covers a wide range of archiving and data management needs. - Ensures compliance with legal and regulatory requirements.	- Can be expensive depending on the scale of implementation. - May require specialized knowledge for setup and management.
EASY Archiving	EASY Software offers a comprehensive archiving solution that integrates with SAP to manage both structured and unstructured data.	- Seamless integration with SAP for document and data archiving. - Provides full-text search and retrieval capabilities. - Meets legal and regulatory requirements for data retention. - User-friendly interface with customizable configurations.	- May require initial setup effort to integrate with existing SAP environments. - Can be costly for smaller businesses.

Table: Comparison of different third-party archiving tools

Comparison Summary

Integration: OpenText and PBS Software offer deep integration with SAP systems, making them ideal for organizations heavily invested in SAP.

Cloud-Based Solutions: Solix provides a flexible, cloud-based approach that can be cost-effective and scalable.

Reporting and Visualization: ArchiveHub.io excels in reporting and data visualization, making it suitable for organizations that need robust reporting capabilities.

Compliance and Governance: All tools offer strong compliance features, but OpenText, PBS Software, and EASY Archiving are particularly noted for their comprehensive compliance and governance capabilities.

Best Practices for SAP Archiving

To ensure the success of SAP archiving initiatives, organizations should consider the following best practices:

Establish Clear Data Retention Policies

Organizations should define clear policies that outline data retention periods based on regulatory requirements and business needs. These policies should address how long different types of data should be stored, when it should be archived, and when it can be deleted.

Regularly Review and Update Archiving Strategies

SAP archiving strategies should be regularly reviewed to ensure that they are still aligned with the organization's evolving needs and compliance requirements. This includes checking the retention periods, reviewing legal mandates, and optimizing archiving tools.

Use Automation for Archiving Processes

Automation of the archiving process helps reduce human error and improve the efficiency of data management. SAP's native tools like ADK and ILM allow for automated archiving, helping ensure that data is archived consistently and in compliance with legal requirements.

Optimize Storage with Data Tiering

Organizations should implement data tiering strategies to move infrequently accessed data to lower-cost storage. This reduces the cost of maintaining production systems while ensuring that archived data is still accessible for compliance and audit purposes.

Conclusion

Effective SAP archiving is essential for organizations to manage their data efficiently, reduce infrastructure costs, and comply with legal and regulatory requirements. By leveraging tools like SAP ADK, SAP ILM, NLS, and cloud storage solutions,organizations can significantly reduce their infrastructure operating costs without compromising the integrity of their data retention strategies. Third-party solutions like OpenText, Solix, ArchiveHub.io, and PBS Software offer further flexibility and scalability, making them valuable additions to the SAP archiving toolkit. Regularly reviewing and updating archiving policies, along with automating archiving processes, can further enhance the effectiveness of these strategies. As data volumes continue to grow, adopting best practices for SAP archiving will be crucial for organizations to maintain operational efficiency and regulatory compliance.

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