

EMC Documentum Archive Services for SAP: High-Capacity, SAP-Certified Archiving for Reducing Costs and Risk

A Detailed Review

Abstract

Archiving data and documents efficiently and cost-effectively is critical in an environment of increased regulation and litigation. Archiving plays a key role in loss prevention and business continuity. For firms using SAP[®] solutions, it is essential that their archiving and storage capabilities work seamlessly with those applications. Content services that integrate with SAP applications improve compliance with regulations and internal policies, system performance, and customer service. Even better are content services that can broker requests from more than one SAP system at a time, scaling for high-capacity use and protection. Read more about the advantages of content services designed for use with SAP solutions.

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Executive summary

EMC® Documentum® Archive Services for SAP is a fully supported product *that allows direct connection* between any SAP® system (SAP® R/3®, ECC® ERP, PLM, CRM, and BW) and EMC tiered storage, such as EMC Centera® content addressed storage (CAS). It is designed to store, classify, and enable the easy retrieval of SAP data archive files, printlist reports, and outgoing business documents. IT staff can retrieve these objects using standard SAP features without additional training. A minimum of administrative tasks is required to install Archive Services for SAP. Its data transfer features (for archive files and printlists, for instance) are optimized for high-capacity production archiving, such as burst activity at the end of a month or quarter. Its archiving services are designed to scale to multiple concurrent platforms, including both Windows and UNIX. Archive Services for SAP is certified by SAP (SAP HTTP ArchiveLink®, BC-ILM 2.0).

Archive Services for SAP can be extended to provide advanced security, *tiered storage management*, and retention policy services. Archived files, reports, and documents can be monitored and managed by IT staff trained in SAP applications and those who are not, using any client application that has Documentum capabilities.

Introduction

This white paper details how Documentum Archive Services for SAP can provide lower total cost of ownership (TCO) and improve regulatory compliance, system performance, and customer service levels associated with SAP applications. It proceeds to illustrate the critical features of Archive Services for SAP and its associated support for SAP NetWeaver Information Lifecycle Management. System requirements and implementation scenarios are among the topics discussed.

Audience

This white paper is intended for SAP application owners including SAP Basis administrators, architects, storage administrators, directors, and CIOs. As SAP is a mission-critical application, the issues discussed in this white paper, including reducing operational costs and risk, are of strategic importance to enterprises and impact a large cross-section of SAP stakeholders.

Lower TCO with tiered storage

Documentum Archive Services for SAP can be extended to reduce storage costs by leveraging storage resource allocation. This is accomplished with EMC Documentum Content Storage Services (CSS). CSS uses the extensible metadata and rich content services available on the Documentum platform and supports all EMC storage platforms. It supports non-EMC storage platforms through a file system interface or custom connectors (Hitachi, NetApp, IBM, HP, and so on). CSS is complementary to disk-level/HSM products and is integrated into the Documentum Content Server and Admin Console.

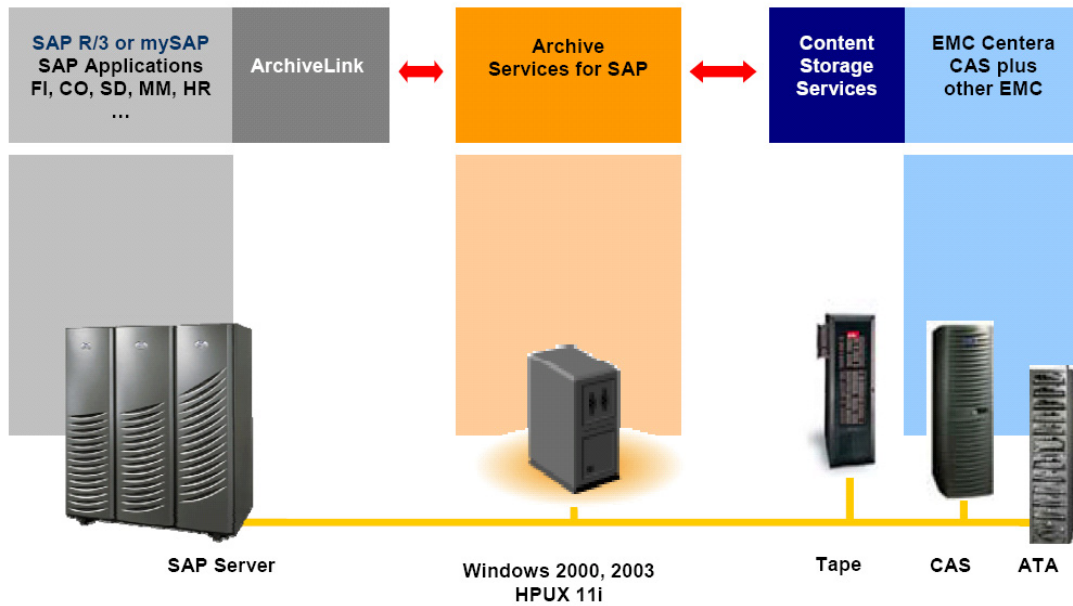


Figure 1. Archive Services for SAP in a tiered storage environment

Improved regulatory compliance

Increased corporate regulation and a demand for tighter controls call for greater compliance functionality and data safeguards. It is equally important to be able to retain transactional data and documents according to approved retention policies.

A recent AIIM survey of U.S. corporations revealed that the Sarbanes-Oxley Act of 2002 and internal audits are driving significant changes in companies' information management strategies.

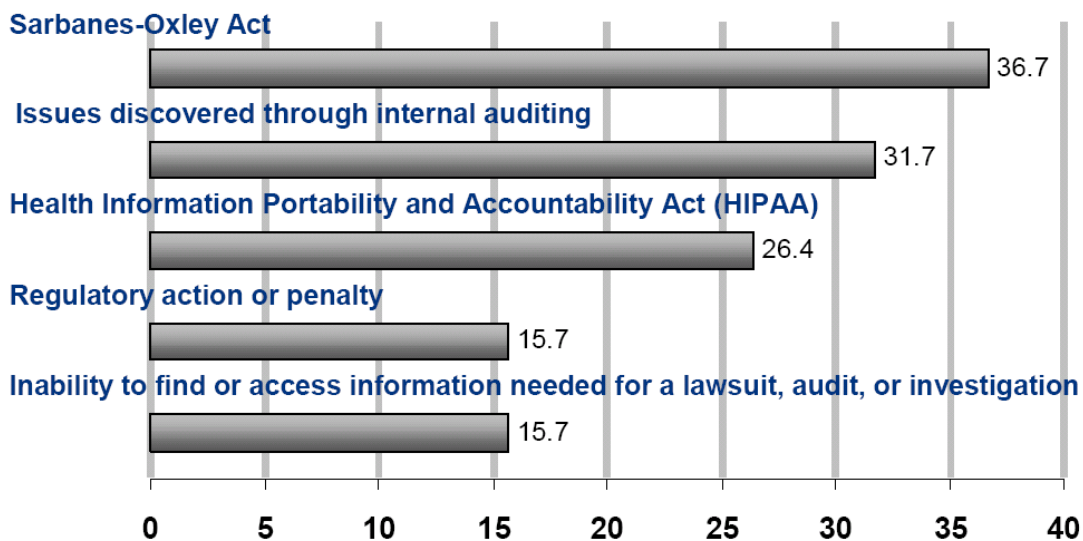


Figure 2. Sarbanes-Oxley is integral to companies' information management strategies

U.S. and international regulations also have proliferated. They include:

- EU Data Protection Directive (Directive 95/46/EC)
- U.S. Health Information Portability and Accountability Act (HIPAA)
- Electronic Signatures in Global and National Commerce Act (E-SIGN)
- SEC 17 a-4 (17 CFR 240. 17 a-4)
- FDA Part II (21 CFR Part II)
- Gramm-Leach-Bliley Act
- California Database Protection Act (1386)

A comprehensive SAP information management strategy, consisting of data and document archiving, is essential to addressing these new regulations. When combined with other EMC and Documentum products and services, Documentum Archive Services for SAP helps you:

- Centralize control over corporate records
- Provide support for legal holds
- Manage information at both application software and storage layers
- Support consistent policies across all records
- Ensure secure, long-term management and control of critical documents
- Scale to accommodate more information
- Reduce the cost of information discovery
- Enhance loss prevention for business continuity

The EMC Documentum solutions for compliance with SAP provide IT departments the benefit of a single integrated platform. This comprehensive SAP compliance platform is easier to maintain and administer than a multiple-point solution, and ultimately will reduce compliance infrastructure costs.

Improved system performance

A comprehensive SAP data and document archiving strategy will help speed system response times. When obsolete transactions are archived, searches are faster because they require looking through fewer items. This is especially true for full-table scans and full-index searches. Because too many indexes can confuse the optimizer, fewer indexes mean lower storage and insert costs. Figure 3, derived from an actual customer analysis, shows the different levels of response time for transaction MB51 (Display Material Document) for different size MSEGs.

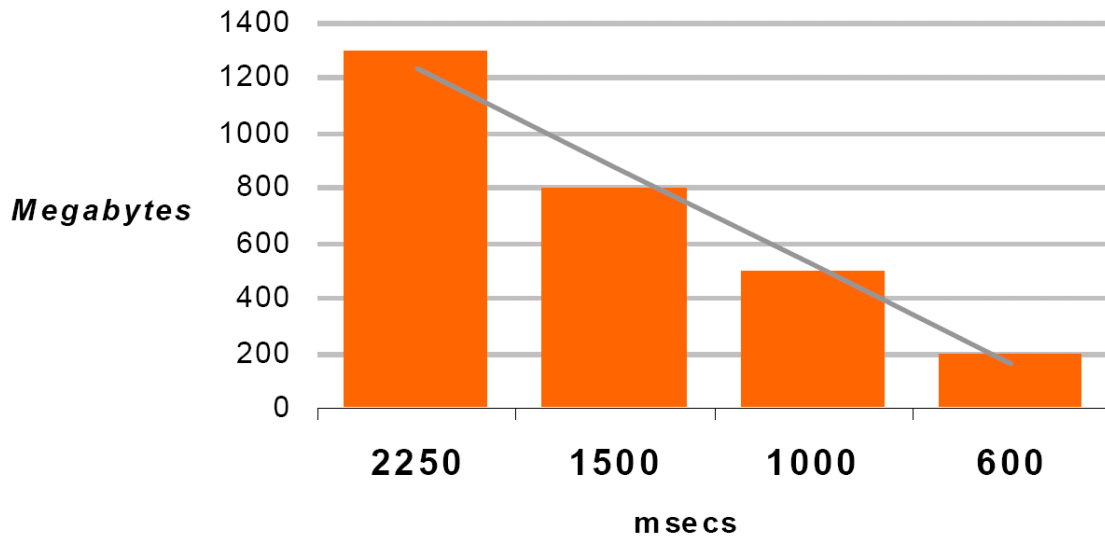


Figure 3. Level of response times associated with a Display Material Document

Improved customer service levels

All IT departments need to be aware of meeting service level agreements with their internal customers. Information lifecycle management helps reduce the cost and complexity of managing information as its value changes over time. Figure 4 shows several hypothetical service levels and their representative costs. Each service level has associated response and recovery times. A combination of Documentum Archive Services for SAP, Content Storage Services, and EMC tiered storage enables companies to manage the information lifecycle effectively in the face of rapidly growing data and document volumes.

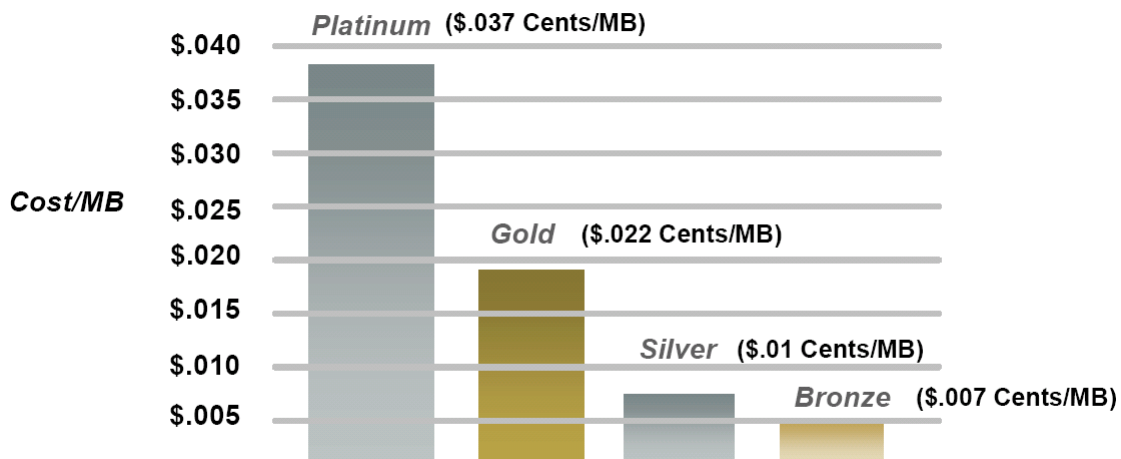


Figure 4. A spectrum of service levels and their representative costs

Features of Archive Services for SAP

Think of Documentum Archive Services for SAP as a sophisticated traffic broker. It works like a transparent, high-capacity archiving layer, concurrently servicing multiple SAP R/3 instances and archiving to targeted storage devices (such as EMC Centera and multiple EMC or non-EMC storage devices). It handles archived objects of all volumes and sizes, including data archive (ADK) files, printlists, and business documents generated by SAP applications.

Archive Services for SAP works with other Documentum products to classify, render, and view archived objects. This gives administrators and end users the ability to efficiently manage data. It also migrates archived data seamlessly among storage devices, while maintaining consistent access, security, and retention management.

Using other product solutions, such as imaging, scanning, and workflow, Archive Services for SAP can be combined with EMC Documentum Content Services for SAP to become the complete EDM/DMS backbone for all SAP applications.

Support for SAP NetWeaver Information Lifecycle Management

Archive Services for SAP provides optional support for SAP NetWeaver Information Lifecycle Management. With SAP NetWeaver ILM, enterprises can set information retention rules in their SAP production environment, enabling the retention of different business records for different periods of time according to policy or legal requirements.

Archive Services for SAP maintains, extends, and enforces the retention policies created in SAP NetWeaver ILM to archived content that is stored in EMC Centera. The result is an optimal and efficient SAP archive where information is preserved only as required by business use, regulation, or policy. In the event of an audit, investigation, or litigation and subsequent e-discovery requests, Archive Services for SAP can suspend disposition and place content in a state of legal hold through the duration of the matter.

How Archive Services for SAP integrates seamlessly with SAP NetWeaver ILM

- Upon ingestion via ArchiveLink or WebDAV, archived objects are classified according to SAP business context and can be consolidated with other captured information (for example, reports, images, or files).
- Archive Services for SAP receives SAP NetWeaver ILM Properties and maps them to EMC Documentum properties and retention policies
- Archive Services for SAP then associates policies to EMC Documentum folders, and content objects
- EMC Centera then enforces retention settings that were passed from SAP NetWeaver ILM to, or modified in, EMC Documentum
- When there is a need to present the systematic deletion of content in the event of litigation and related e-discovery, selected users can apply a legal hold to an object or document, which “freezes” the item from any alteration or deletion until the legal hold is removed by a responsible authority. Content is retained until legal holds are lifted, even if the expiration date is over. Again, the legal hold can be applied to any related content, even if it is not SAP-generated or -related.

With support for SAP NetWeaver ILM, Archive Services for SAP delivers business benefits such as the following:

- SAP-defined retention can be applied to all archived and business content.

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- SAP-defined retention can be augmented with additional services such as storage policies, approval workflows, advanced disposition states, and others.
 - New SAP archives can be integrated with older, decommissioned SAP data and documents.
 - Enterprise retention management is provided by Federated Records Services.
 - Enterprise-wide access to SAP archives.
 - Tight integration with industry-leading content addressable storage in EMC Centera.

Product features are follows:

- Fully SAP ArchiveLink-certified
- SAP BC-ILM 2.0 certified
- Supports multiple concurrent SAP R/3 instances
- Supports concurrent multiple platforms (such as Windows, UNIX)
- Natively supports direct EMC Centera
- Supports all concurrent EMC and non-EMC storage
- Requires minimal installation and maintenance
- Used by existing high-capacity archiving customers (greater than 1 TB)
- Packaged Professional Installation Services
- Utilizes Java and Java App server integration
- Supports all DBMSs
- Worldwide EMC support

Archive Services for SAP is SAP ArchiveLink-certified and can do the following:

- Retrieve information about the document
- Fetch (within a range) a content unit of a component
- Fetch the entire content of a document
- Create a new document
- Create a number of new documents
- Append data to a content unit
- Modify an existing document
- Delete a document or a component
- Search for a text pattern within a content unit
- Search for one or more attributes within a document
- Transfer a client (such as the SAP system) certificate
- Retrieve information about the content server and repositories

Archive Services for SAP is also BC-ILM 2.0 certified and provides the following:

- WORM-like immutability
- Set/get expiration date, either a specific one or an unspecified one if not yet determined
- Prolong retention of a record
- Enforced non-deletability until an object expires

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- Legal Hold (hold order / litigation hold) management
 - Add legal hold (case), also enforcing non-deletability
 - Remove legal hold
 - Get all legal holds (cases) that have been placed on an object
 - Expose retention-relevant parameters as nodes (WebDAV collections) in a hierarchy
 - Keep additional ILM-related meta data as properties and their values
 - Return explicitly set properties and their values of a given object
 - Final delete operation that destroys data so that it cannot be recovered again.

Available extensions include:

- View/edit from EMC Documentum Webtop
- EDM extensions (Library Services, Content Services, Process Services)
- Document and report workflow
- Enhanced security
- Enhanced retention management
- SAP metadata replication
- Integrated web publishing (SAP reports)

System requirements

Documentum Archive Services for SAP runs on both Windows and UNIX (initially HP-UX) servers. It uses an application server runtime environment, which is bundled with the product, for greater reliability and resource utilization. Other hardware and software system requirements are listed below.

Hardware

- Windows
 - Intel-based PC server hardware
 - CPU Pentium IV or later (minimum 2 GHz)
 - System memory—2 GB minimum
 - Disk space—4 GB minimum
- UNIX box
 - Processor speed
 - System memory
 - Disk space

Software operating systems

- MS Windows 2000 SP4 and later
- MS Windows 2003 Standard Edition
- HP-UX 11i

Application server

- Apache Tomcat 5.0.28 and later
- JDK 1.4.2_05

SAP software

- All releases from SAP R/3 4.6c to SAP Enterprise (4.7)
- All SAP Basis release levels
- SAP ArchiveLink 0045

Implementation scenarios

Documentum Archive Services for SAP brokers archiving requests from multiple, concurrent SAP systems. More than one instance of Archive Services for SAP can be deployed, scaling to the highest-capacity use cases. It connects directly to EMC Centera and, through extensions, to multiple EMC storage devices. This enables the migration of archived data among storage devices for lower TCO, while maintaining consistent access, security, and retention management.

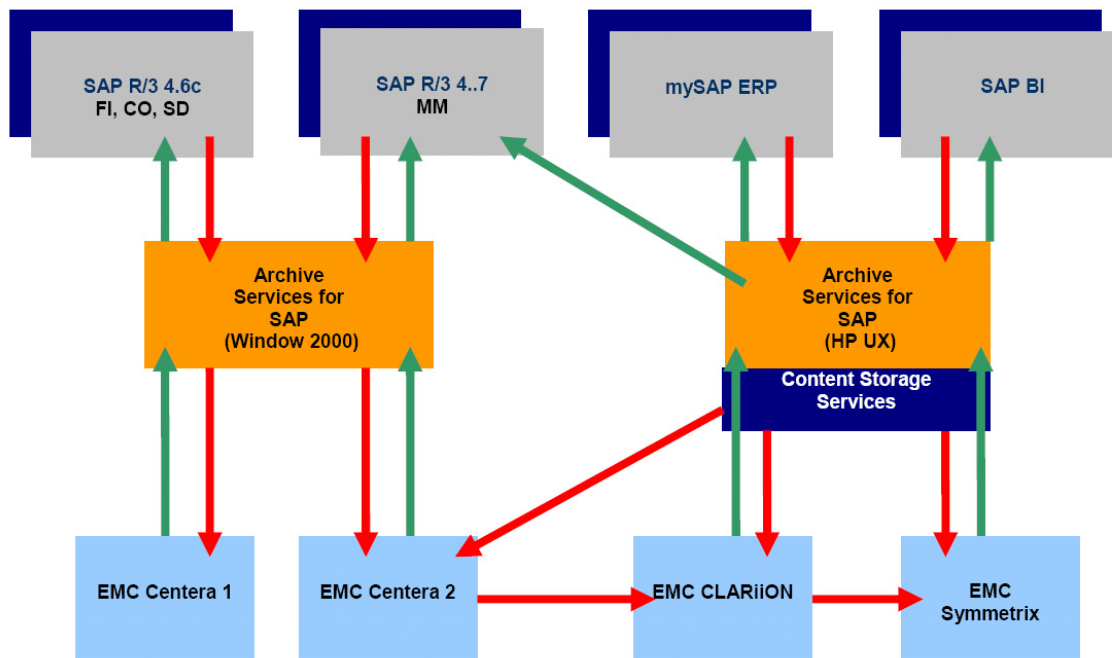


Figure 5. A multiplatform deployment scenario for Archive Services for SAP

Retrieval of SAP archived data

Printlists and outgoing SAP documents can be archived directly to EMC Centera or other storage directly from standard SAP screens. Retention periods can be taken from the default SAP retention periods or assigned separately. Separate security attributes can be assigned, restricting access to the printlist. Through an optional client extension, printlists can be managed separately, allowing users to classify, annotate, render, and control versions. This way the entire collection can be managed as a whole.

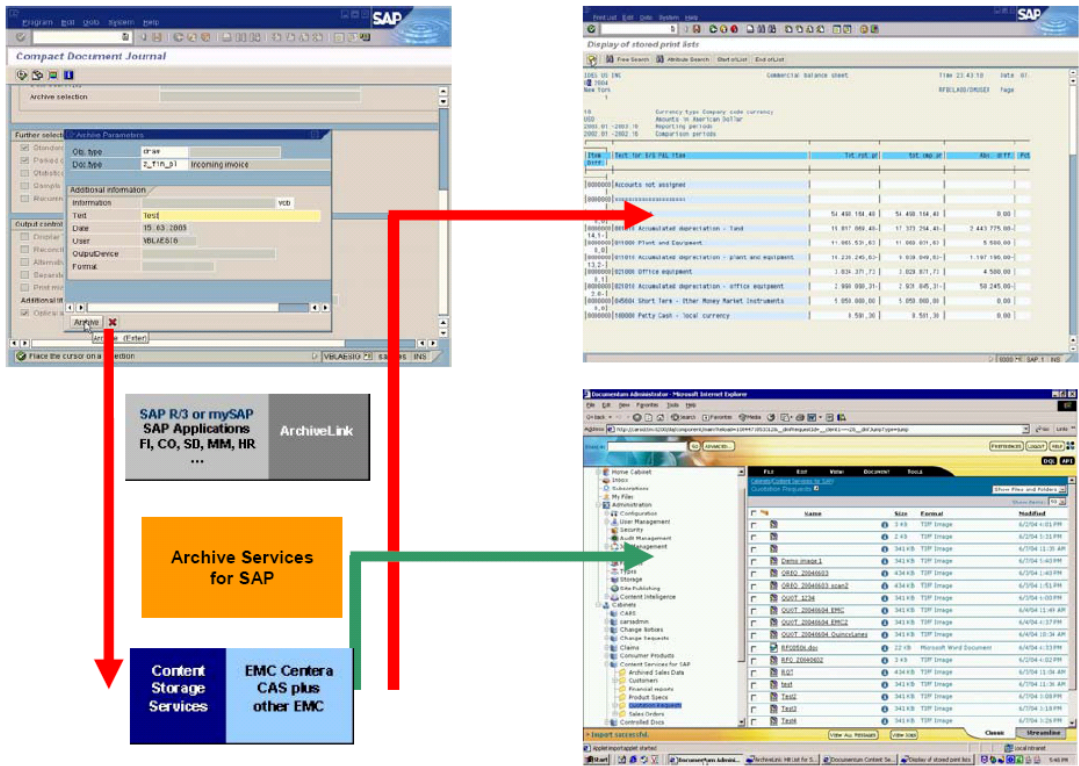


Figure 6. Viewing SAP documents with the SAP GUI

This example shows how an SAP business document, such as a delivery notice, can be archived into EMC Centera and then easily retrieved through the SAP GUI. Optional client applications, such as Documentum Webtop, allow the outgoing documents to be edited and managed. Documentum extensions allow the business document to be rendered, version controlled, distributed, or approved using a workflow.

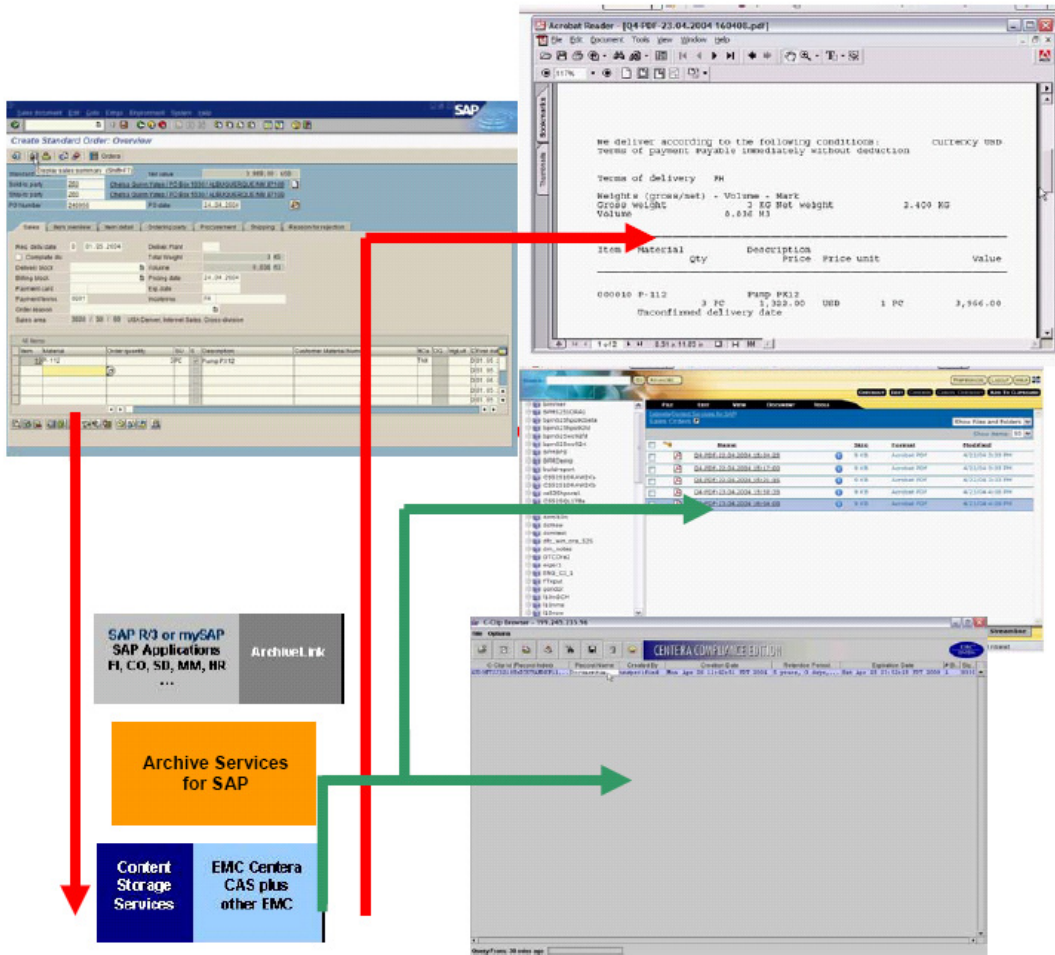


Figure 7. Viewing printlists rendered to PDF with Archive Services for SAP

EMC Documentum product extensions to Archive Services for SAP

EMC Documentum products

- Content Services for SAP
- Trusted Content Services
- Content Storage Services
- Retention Policy Services
- Webtop

EMC products and solutions for SAP

- SAP Business Warehouse/Data Warehouse Initial Load
- SAP Expert Monitor for EMC (SEME)
- Replication Accelerator for SAP
- BRbackup for SAP
- VMware® server consolidations for SAP

Conclusion

Documentum Archive Services for SAP is a lightweight, certified SAP archiving solution, directly connected to EMC Centera and other EMC storage. It can run on multiple concurrent Windows and UNIX environments, enabling it to scale to very large capacity archiving scenarios.

Used by several hundred customers around the world for very high-capacity, mission-critical SAP archiving (more than 1 TB in total storage), Archive Services for SAP is based on the certified SAP archiving services Documentum has been providing since 1997.

Extensions to Archive Services for SAP enable greater classification, security, and retention policy management, including support for SAP NetWeaver ILM of SAP archived data and documents. Additional extensions allow more complete SAP EDM functionality, such as document workflow, version management, and web publishing.