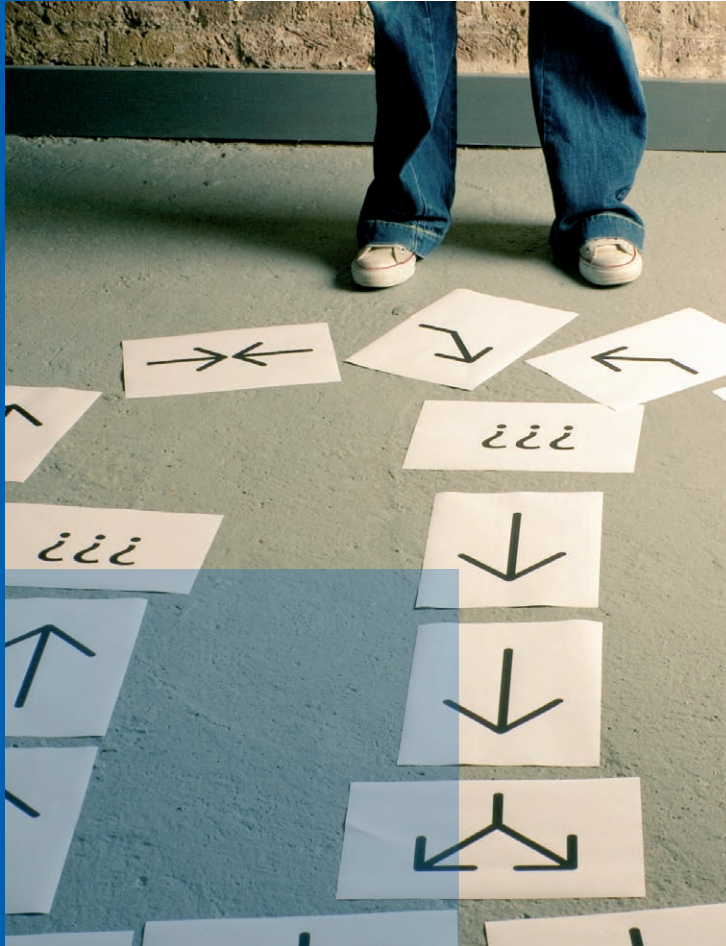


Information Lifecycle Management with windream



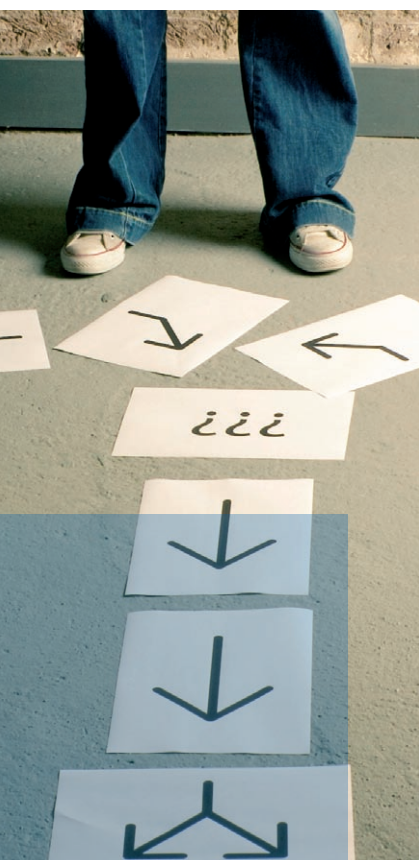
**Extended archive functions,
hierarchical storage systems
and performant data migration**



Extended archive functions, hierarchical storage systems and performant data migration

The efficient management of business processes in companies mainly depends on information availability. The high availability of huge data volumes is nowadays realised by hierarchical storage management concepts. They have mainly been designed for migrating and moving data between different storage subsystems, media types and hardware technologies.

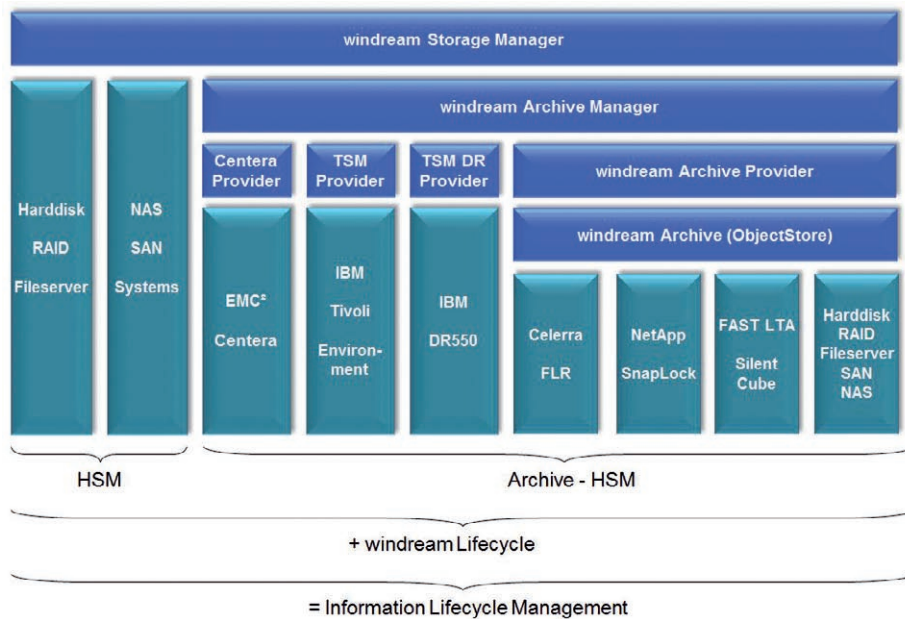
This could be recommended if documents, which have not been edited or opened during a specific period of time, shall automatically be moved from a high performance storage, e.g. a SAN, to slower or cheaper media like file servers or NAS.



Cost and benefit. The cost and benefit factor of the storage systems used plays an outstanding role in this context. Generally, fast systems are considered to be more cost-intensive than low performance systems. Companies planning to invest in complex storage systems should consider this aspect carefully when evaluating suitable systems. Another decisive argument concerning the performance of the complete infrastructure system is the software which is able to control different storage systems simultaneously and centrally. In this context, windream is regarded as an ideal control center.

Especially in the sector of enterprise content management (ECM), hierarchical storage management (HSM) concepts have been developed to provide documents which have been stored in one or in several electronic storage systems as quickly as possible. In order to fulfill this objective, it is required to move data in an extremely flexible, well constructed and performant way.

Integration of different storage systems. Due to its open architecture and containing the components client, server and webserver (with zero footprint installation), windream is the ideal tool to be used as a data infrastructure system with an integrated storage management solution. The option to connect different storage systems via a provider interface integrated in the windream storage management module enables the system to act as a complex data infrastructure system with an integrated lifecycle management. In this context, windream controls all providers of the IT-environment and their storage systems.



windream storage management with different providers

Intelligent controlling. windream can control the internal storage sectors of one provider and several parallel systems as well. This way, it is possible to move documents to different subsystems within a complex environment, in order to transfer data e.g. from a less performant system to a faster one (or vice versa).

Of course, data can also be migrated within the storage sectors of a single provider.

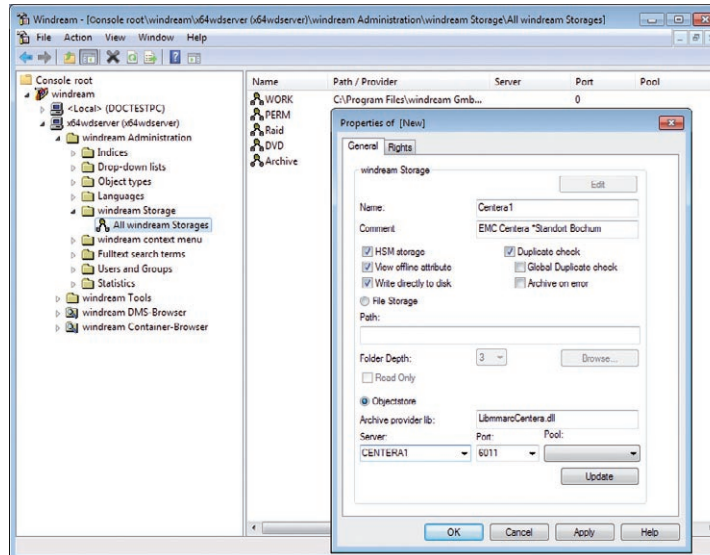
Document and connection cache. windream uses a document cache for quickest data supply, which permanently provides frequently used documents. Specific connection caches keep connections to certain providers upright and thus avoid the establishment of new storage connections each time they are requested.

This process is much more time-saving than a repeated re-connection and enormously speeds up the access to documents.

Performance features:

- Providing stored documents according to individual needs
- Extending the ECM-system to a complete data infrastructure system
- Parallel controlling of different storage concepts
- No extensive adjustment of the ECM software
- Easy and quick integration of storage systems via a provider interface

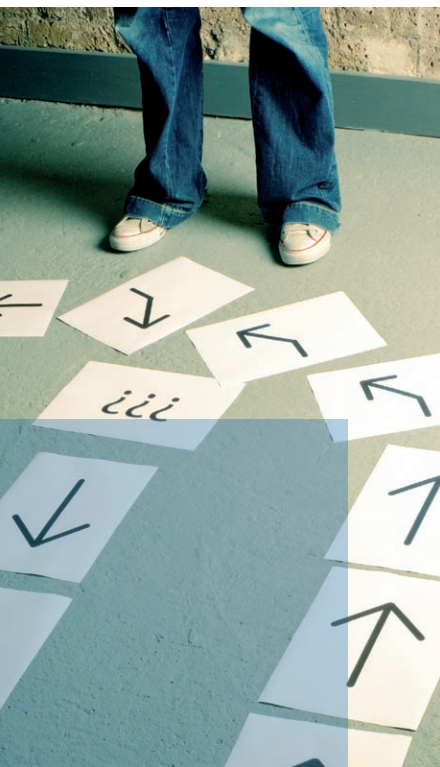
Storage management. The settings of available storages can conveniently be viewed and adjusted via the windream Management Console (WMC). New storages can also be added via the storage management function of the WMC.



windream Management Console – determination of a storage sector for document archiving

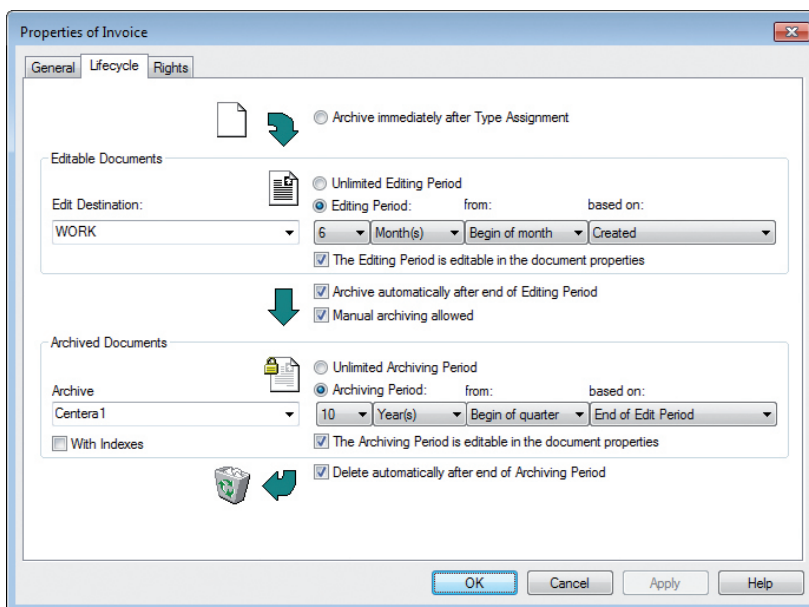
Connection via the lifecycle administration. The storage system of a provider and a defined windream object type (document or folder type) are connected to the integrated lifecycle administration. It determines how long documents of a specific type are available for being edited, how long they shall be archived and when they shall be removed from the system.

Within the lifecycle, one storage is available for each lifecycle sector. The defined cycle is valid for all documents of a specific document type.



Data transfer on the basis of search profiles. The data transfer between the different storage systems can also be executed completely isolated from the windream lifecycle or in addition on the basis of windream-specific search profiles. In this context, windream allows users to transfer a number of documents which have been found after executing a search profile to another storage sector. All properties which are known to windream can be used for selecting documents throughout a search.

Documents can be retrieved in file storages for editable documents (e.g. on file-servers) and in the different provider systems, in which non-editable documents might have been stored, too.



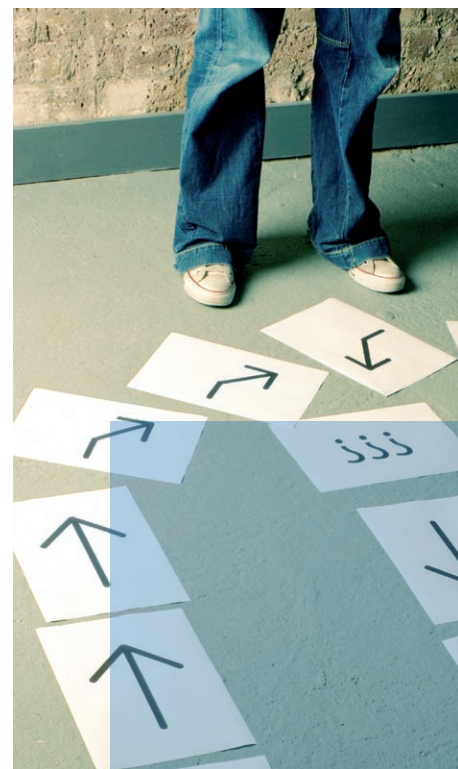
Example for life-cycle rules with document type „Invoice“

Return. After being edited, a document will automatically be returned to its original place of storage (e.g. transfer to a fileserver, NAS or SAN system to increase the access performance again), if the current place of storage has been marked as an HSM-storage in the windream storage management module. By using the VFS-technology, a user will always see his documents in an unchanged folder-document-hierarchy, which is independent of the actual storage location of the documents.

In contrast to other solutions, windream does not need any stubs (links to originals) for this virtual administration. Seen from a user's point of view, the information lifecycle function is a remotely controlled filing strategy which is clearly transparent.

The combination of different storage systems with the lifecycle administration integrated in windream and the HSM-functionality, which is independent of document types, it is possible to expand the ECM to a complex information lifecycle management system, which can still be managed quite easily. This way, windream will become a complete infrastructure system for companies.

Convenient storage administration without software adjustment. windream administers documents in configurable storages, which refer to the storage systems of the respective providers.



Besides the windream archive and the windream ObjectStore, the following storage solutions are supported:

- Local storages (RAIDs);
- Fileservers;
- SAN, NAS;
- EMC² Centera;
- IBM Tivoli;
- IBM DR 550;
- IBM OnDemand;
- Network Appliance SnapLock.

Further providers can be integrated easily and quickly.

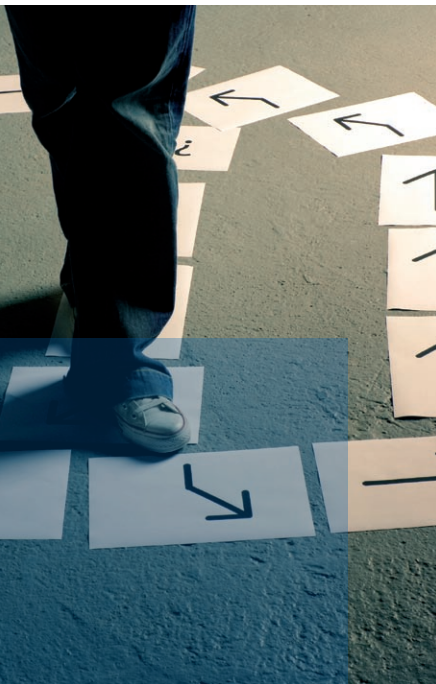
No adjustment of the windream software required. In order to integrate the storage systems, it is not required to adjust the windream software. A new system is simply integrated by a specifically adjusted program library (provider-DLL).

Homogeneous view on Documents. The integration of the windream ECM into the Windows operating system allows users a homogeneous view on documents which are still editable (e.g. on a fileserver) and on archived documents. Independent of their current storage location and of the technology used, all documents in the folder structures of the Windows Explorer

or of the windream drive are displayed in the usual way. The advantage: Users do not need to get familiar with different graphical user interfaces permanently, and they do not have to learn heterogeneous types of software handling. Instead, windream works as a control center for all providers and storage systems, which windream can control simultaneously. In the context of the different providers, windream will become the controlling instance of a complex, interactive and highly available infrastructure system for data administration.

Migration of storage systems. Of course, all data movements described work parallel and remotely while being in productive use. Thus, these mechanisms can also be used as a replacement of somehow „old-fashioned“ technologies, e.g. CD-R media in jukeboxes, and for migrating data to modern subsystems like e.g. Centera by the EMC Corporation.

Controlling heterogeneous archive systems. Further on, windream can also be used as the controlling instance for administering other electronic archives. In this case, windream – as a superior system – manages the coordination of data archiving within the systems and the controlling of data movement between different archive systems.

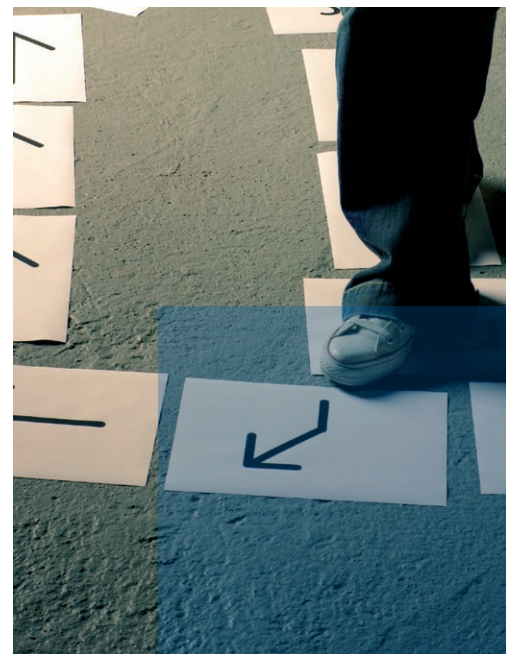


Further features:

- **ADS-Support:** The Information Lifecycle Management with windream also supports the Active Directory Service (ADS).
- **Remote Administration:** The administration of the storage systems can also be executed as a remote service.
- **History:** Exact information on document changes are logged in the windream history. The history contains information on the points of time changes were made, on the type of change and on the users who edited the documents.
- **Access via Internet:** The windream web portal allows users to access the storage systems via the web. The windream web portal can be used to retrieve documents and to edit them or to view and change the properties online via the internet. The use of the windream web portal does not require any additional software equipment.

All features at a glance:

- Parallel and single control of the provider systems;
- Document cache;
- Connection cache;
- Data transfer on the basis of windream search profiles – even in the archive storage, within the editing period and during the archiving period as well;
- Further providers can be integrated easily and quickly;
- Automatic return of a document to its original storage location after access;
- Enhancement of the windream ECM to a complex infrastructure system;
- No adjustment of the windream software required;
- Connection between windream and provider system via program libraries (provider-DLLs);
- Homogeneous view on documents;
- Migrations of storage sectors while being in productive operation;
- Controlling heterogeneous electronic archiving systems;
- ADS-support;
- Remote administration;
- Loggings in the document history;
- Access to stored documents also via internet.





Rely on the Technological Market Leader

If you plan to invest in an innovative, efficient and easy to handle ECM-system, or if you need further information on how to optimise your business processes concretely, we should get to know each other.

In the market sector of ECM-software suppliers, windream GmbH is the technologically leading manufacturer. With the windream ECM-system based on the patented Virtual File System technology (VFS), we have created an unrivaled tool for administering your complete company knowledge. Our software is easy to handle, effective, and future-proof. We have 20 years experience in successful software solutions development for enterprises of any size. Medium-sized companies and multinational corporations as well rely on our top quality products and on our technological know-how.

Look and see!



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