# **ARCHIVE**MANAGER –
# Flexible, Scalable, Cost-Effective.

## GRAU ARCHIVEMANAGER

**Data and information comprise the capital of every business, so efficient archiving is indispensable. The ARCHIVEMANAGER from GRAU DATA offers solutions for the secure, long-term and audit-compliant archiving of all data according to the Sarbanes-Oxley Act, independent of which hardware or archive application is used.**


# At a Glance:
## The Central Advantages of the **ARCHIVE**MANAGER

### SCALABLE
Whether it's used by a medium-sized company or a large concern, the ARCHIVEMANAGER is freely scalable starting at 1 terabyte and up to an archive capacity of several petabytes.

### TRANSPARENT
The ARCHIVEMANAGER preserves the original directory structure, so each user can directly access all data, exactly as he did in the past.

### COST-EFFECTIVE
Existing RAID systems (e.g. in a SAN), and/or backup LTO libraries, can also be used as a disk and tape archive.

### OPEN INTERFACE
The ARCHIVEMANAGER communicates with Windows and UNIX servers via CIFS or NFS. One's own proprietary API is therefore not necessary.

### APPLICATION-INDEPENDENT
The ARCHIVEMANAGER guarantees the compatibility of existing and future archiving products from independent software manufacturers (ISV) for DMS, e-mail, files, audio, video, PACS, engineering and other applications. The list of certified archive applications is constantly being expanded.

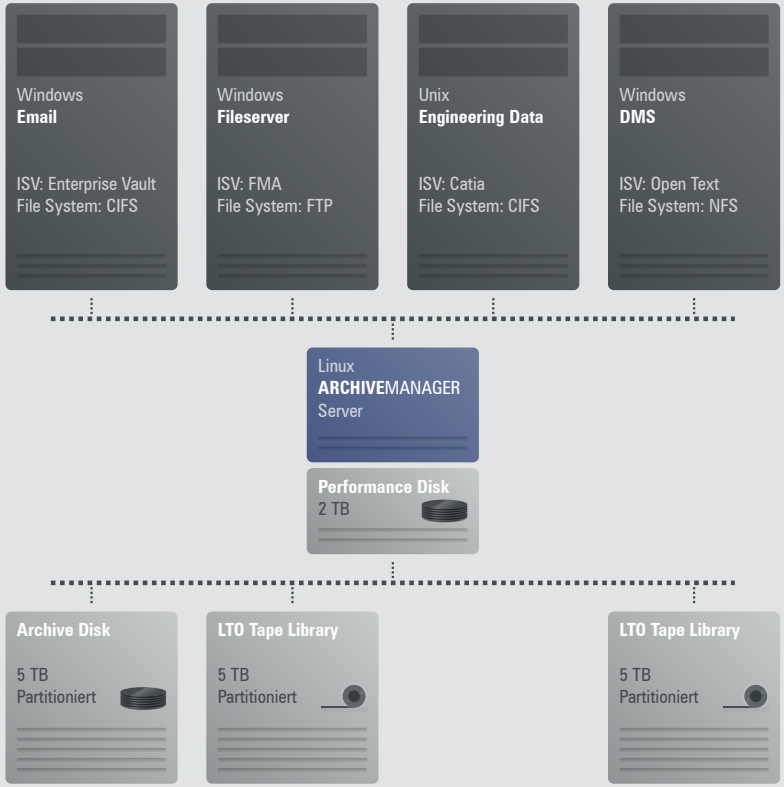
### HARDWARE-INDEPENDENT
With the ARCHIVEMANAGER, you can use various hardware components from all of the major manufacturers for Windows and Linux based servers, PerformanceDisk, ArchiveDisk or LTO-based tape archives.

### DATA SECURITY
Multiple copies are stored locally and/or remotely, so you needn't worry about your data. Metadata are redundantly stored to facilitate rapid recovery after a disaster.

### STORAGE POOLS
Fast disk-based systems or magnetic tapes? The ARCHIVEMANAGER makes both options freely available. Combinations of archive media can be configured to create a custom-tailored tiered-storage solution, e.g. disk/disk, disk/tape, tape/tape, disk/tape/disk, disk/tape/tape etc.

### AUDIT-COMPLIANT
The integrated WORM file system fulfils all compliance requirements according to the Sarbanes-Oxley Act and can also be augmented with unchangeable data media (e.g. LTO WORM tapes).

### BILLIONS OF FILES
Limitations are inherent in standard Windows- or Linux-based file systems. The MillionBillionFileSystem (MBFS) offers you a special module that overcomes these limitations.




# Customer Example: Industry, Development, Production

**An industrial customer was looking for a universal archiving solution to handle its heterogeneous applications: Windows Fileserver, e-mail server, DMS application server and a UNIX-based CAD engineering solution.**

## Goal

To establish a secure long-term archive with as little investment as possible.

## Solution

ISV software products were already in existence to handle the e-mail, DMS and file archiving applications. Until now, These products had locally archived the data on jukeboxes or disk-based systems. This data is now written centrally to the ARCHIVEMANAGER, which keeps the data available on the PerformanceDisk for twelve months and simultaneously stores several copies locally on tape and SATA, as well as writing an additional copy to tape in the second computer center. The existing SAN disk system is used as PerformanceDisk. The disk archive ensures rapid access, and the two additional copies on tape provide doubled security to prevent data loss.

The CAD engineering data involves project developments which are written completely via NFS to tape after the project is completed. This data is saved locally and in the second computer center. Access speed is not important for this data, so it is archived exclusively to tape. In most instances requiring access, all of the project's data is recalled.

## RESULT

New investment in ARCHIVEMANAGER software; a SATA RAID system partitioned for e-mail, DMS and Fileserver data; Intel-based server. An existing SAN system (used as PerformanceDisk) and existing backup LTO libraries were integrated into the solution locally and in the second computer center.


# The Technology
## How Does the **ARCHIVE**MANAGER Work?

**The user sees a standard Windows or Linux file system in the network, so the archive can be used immediately and without any need for adaptation.**

In principle, the ARCHIVEMANAGER can manage an unlimited number of files on nearly any type of storage system or component. The file system is located on a so-called „PerformanceDisk." Data is initially written to this PerformanceDisk; however, the data remains transparent and visible via pointers or indicators even after it has been migrated to archive disks or magnetic tapes.

Cost-effective SATA disk systems or LTO-based magnetic robot tape library systems can be used as archive media. For security reasons, two or multiple copies of all data are generally stored. The ability to flexibly select the storage media is one of the strengths of the ARCHIVEMANAGER. For example, two copies can be archived locally on disk and tape, with one or more copies archived remotely on disk and/or tape. This ensures the optimum combination of access speed, security and cost-effectiveness.

In the long-term, magnetic tape systems are likely to remain the most cost-effective archive medium, especially because of their extremely low operating costs (energy consumption). Furthermore, magnetic tape systems also support the additional option of using WORM tapes to uphold the highest possible security requirements.

It makes sense to use tiered storage concepts for very large archives of 50 TB and upwards into petabyte dimensions. Sufficiently large disk archives are installed to ensure rapid access to archived data.

A longer load time is generally acceptable for older, seldom-accessed data, so this data is archived exclusively on magnetic tapes. A second copy, stored either locally or remotely, can be used to ensure the necessary data security.