

GFS/TQS – Tape Quality System implements the quality control methodology in the z/OS tape libraries. It identifies the tapes that have reached their use limit, automating the replacement process and guaranteeing data storage reliability for extended periods. It certifies files and tapes, and can prove file integrity, providing the tape library with resources to comply with the current regulation, legislation, and auditing demands.

Quality in the tape library *Information Availability Assurance*

Lately, we have been witnessing a proliferation of requirements that demand information to be stored for much more time. Nowadays, information storage must increasingly comply with legal and physical requirements, regulations, quality standards, auditing, business continuity requirements, service level commitments, and other demands imposed by the businesses themselves.

Storing large amount of data requires huge investments in resources and heavy management efforts. Magnetic tapes are a cheap and scalable way to produce data backups and ought to be available and uncorrupted when requested.

This way, the quality control methodology of tape libraries allows the information storing for an extended time, controlling the tape lifetime, preventing losses and guaranteeing a better media usage.

GFS/TQS – Emphasizes the accomplishment to legal, audit and regulatory requirements (compliance)

Increased Information Reliability

GFS/TQS assures more reliability of information, controlling volume usage and keeping records automatically updated: volume time, number of mounts, total bytes read/written, etc. Meanwhile, it also identifies and totals possible reading or writing errors, whether temporary or permanent, identifying the tapes to be replaced and automatically preparing the routine jobs for replacement.

Proof of integrity *Today's requirement for storage on tape*

The magnetic tape technology is exposed to problems of information integrity assurance, once the information can be lost or corrupted by many factors, like handling conditions and inadequate storage.

Many times, it's necessary to prove that the information stored in tapes is readable and authentic, without any kind of intentional or accidental data corruption. This requirement becomes possible through automation process of Reading and Integrity Certifications, like those found in **GFS/TQS**.

Audit and Regulation Requirements

GFS/TQS produces evidence of the quality management efforts, allowing compliance with internal and external audit requirements, through Reading and Integrity Certifications.

Reading certification: Runs periodic reading certification routines (jobs) for the files in the tape library, showing their availability.

Integrity certification: Produces digital authentication that works as an electronic "fingerprint" for the files, solely representing its content. Possible differences found between authentication versions produced at two different moments are the evidence that the file has been changed, whether accidentally or intentionally.



How to ensure the information was not corrupted?

GFS/TQS Compliance with the Requirements of the New Basel Capital Accord (Basel II)

Broadly speaking, the Basel Accord addresses risk management in banking institutions. Its goal is to establish rules that minimize risks and protect banks from bankruptcy and, should it occur, to make sure that banks retain enough capital to cover up unexpected losses.

GFS/TQS was specifically designed to help companies meet their compliance requirements of information storage in magnetic tapes, implementing resources and functions to:

- Prevent service interruption caused by hardware or software failures – thus reducing the probability of media failure and ensuring more availability of critical information to operations or to fulfill legal requirements;
- Prevent unauthorized transactions – using integrity certification, which clearly indicates the occurrence of fraud in files, thus making this practice much more difficult.

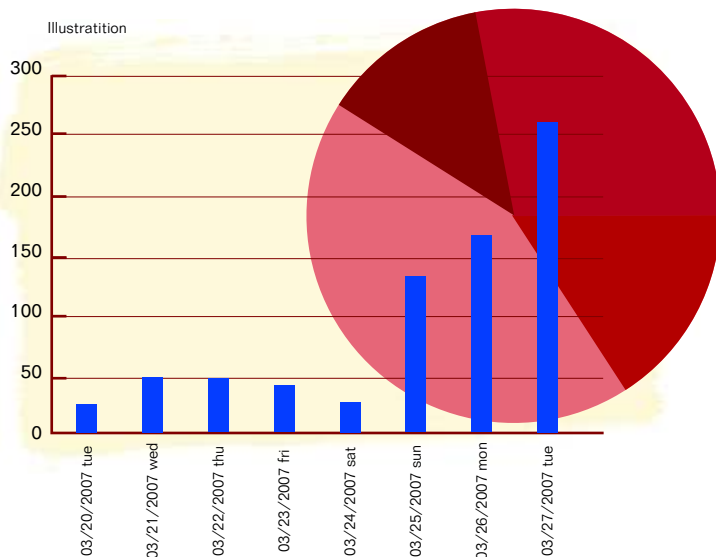
Risk Reduction

The only control companies usually have over their tapes is the lot's time. In this case, the only actual way to control quality is to replace an entire lot that has reached a certain time. This approach is inefficient and risky, since within the same lot, use and wear affect tapes differently. Many tapes are replaced while they are still in good use conditions, resulting in waste and increasing costs. On the other hand, overly worn tapes will be used throughout time, representing risks.

GFS/TQS takes advantage of the tape's life: It allows tapes to be replaced at the ideal moment, neither before nor after, allowing savings and reducing costs. **GFS/TQS** guarantees that the media are in the specified use conditions, greatly reducing data loss.

Management Reports and Graphics

GFS/TQS keeps a complete information database about tape volumes and their datasets. These information can be exported from mainframe to Windows environment, allowing the use of SQL language to produce management reports and graphic views.



Automatic Replacement

In replacement process for worn out tapes, **GFS/TQS** interacts with the tape library manager, maintaining all of the files' original attributes, including dataset creation dates. During the process of copying data to the new tapes, **GFS/TQS** may optionally optimize destination tape usage by using stacked recording.

Retensioning

GFS/TQS offers the periodical retensioning, which restores the media's appropriate tension and alignment, ensuring proper contact between the tape and the tape unit head.

EXCELLENCE IN SUPPORT

GFS' technical team counts on qualified and experienced professionals who are not only experts on the solutions, but also on the environment and customer needs.

With a complete mainframe infrastructure dedicated exclusively to development and support, **GFS** offers customer service 24 hours a day, 7 days a week.

About GFS Software

GFS Software is a Brazilian software house specialized in developing solutions for the IBM Mainframe z/OS environment.

Established in 1988, **GFS Software** is a market leader in tape library management, offering a complete suite of solutions to streamline its customers' storage equipment management.

GFS Software has a nationwide presence providing solutions to companies in the most varied segments. Its customers include some of the country's biggest and most important financial and governmental institutions.

In the international market since 2002, **GFS Software** has established offices in Spain and Germany and has customers worldwide.

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