Tool Functionalities

SAM-WeB:

- WEB GUI based Admin Tool
- Filesystem statistics

SAM Tape Sniffing:

- Checks SAM tapes for the protection against read errors

SAM-Auto Refresh:

- Self-Managing Filesystem
- Frees space from deleted areas immediately

SAM-NeT:

- Integration of Windows environments
- Multiuser access to offline files
- Windows look-and-feel by Explorer plug-ins

cDLM:

- Disaster Recovery concepts ontop Hierarchical Storage Management (HSM)
- No need for additional weekly or incremental backup
- Version-level restore

SAM Fast Media Recycling- / Refresh-Toolkit:

- Efficient recycling (10 times faster)
- Bulk media migration

SAM-Watch:

- Monitoring
- Proactive Surveillance
- Messaging

HSM Migration Toolkit Interface:

- Seamless Migration from other HSM Systems to SAM-QFS
- Allows switch to new file-services over one weekend
- Access to foreign HSM tapes via migration toolkit

SAM Backup Caching:

- Consolidation of Backups to Disk
- Efficient usage and streaming of tape drives

SAM-QFS Enhanced Lifecycle Tools / Modules / Services

SAM-QFS's adaptive file archiving infrastructure (HSM Hierarchical Storage Management) covers many aspects of today's data growth with intelligent data placing and data managing technologies. Together with our tools this leads to increased efficiency and easier administration for data retention, backup, restore, and disaster recovery. For disaster recovery requirements, it delivers a much faster and better infrastructure compared to classical backup technologies.

cDLM - HSM Disaster Recovery

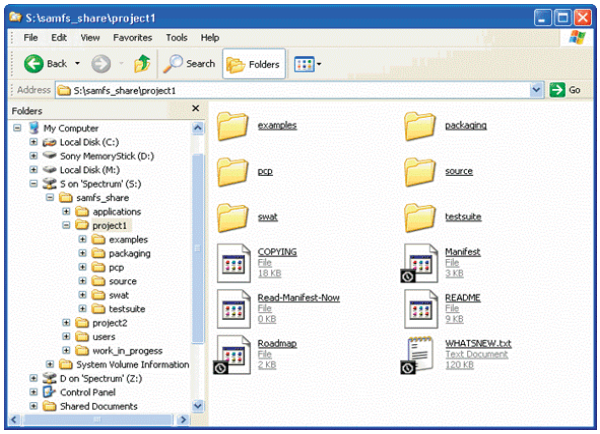
Backup procedures and restore windows can be shortened drastically or even disappear completely. By only copying changed files and by **separating the meta-data** from the user data, backup and recovery concepts can be much more easily. This results in a faster disaster recovery process (making a file system available to users and applications as soon as the meta-data is restored).
Intelligent HSM tools copy data to **multiple locations in parallel** when a file is created or changed. This allows to store the first backup copy i.e. on disk systems, that provides the fastest restore performance. Additional cost savings occur if only a few instances of the same data will be kept: one on the production disk system (most expensive media), one on low-cost disk, and a third copy for disaster recovery on tape or MAID technology.
Additional or incremental backups are no longer needed. An easy-to-use graphical user interface provides a point-in-time snapshot view of the file system. This enables users to **restore** deleted files or file versions in the SAM-QFS file system automatically from any primary or secondary media.

SAM Tape Sniffing checks SAM tapes continuously and automatically (or on inquiry) to prevent read errors. This tools offers blockcount consistency and integrity checks. You will reiceive an announcement in case of error and automatic or suggested solutions. All results from this new tool are saved in a tape usage database and combined with other catalogues or audits.

SAM-Auto Refresh

SAM-Auto Refresh supports you in case you have a huge number of small files in your filesystems (e.g. 50-100 mio files). The problem in case of deletions is that this space is not directly usable - and recycling and additional copies will take very long time.
The solution is a file virtualization that decouples the files from tape media via a disk archive. This allows the immediate usage of deleted space and reduces the currently used volume. All data in the filesystems are online – all applications will run without any change.

SAM-NeT allows the seamless **integration of Windows systems** into SAM-QFS file-services. It provides multi-user and parallel access to offline files during the staging process. The SAM-NeT plug-in for Windows Explorer allows Windows users to maintain the look & feel of Windows when browsing a shared SAM-QFS file system. Via this plug-in, users can display special SAM-QFS **file attributes** like copy information, stage and release files and directories, and quickly see if a file is online or offline by displaying the Windows Explorer offline **overlay icon** for all offline files.

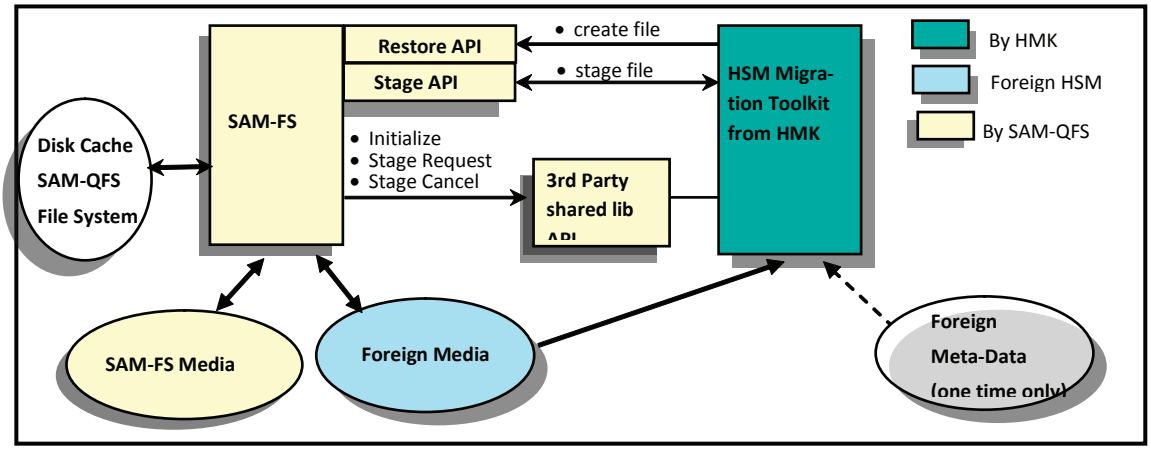


SAM Fast Media Recycling & Refresh Toolkit allows SAM-QFS to **recycle media** much more effectively in a productive environment by reducing administrative overhead and optimizing SAM-QFS functionality. The tool **utilizes continuous data streams** for seamless and continuous read and write operations. This increases the recycle process **up to 10 times** compared to native recycling within SAM-QFS. Via the tool, the number of drives, necessary buffer, and resources used for recycling can be adjusted, to account for parallel production and priority for archiving of newly arrived data. It provides data **migration to new media** with SAM-QFS by utilizing continuous data streams (bulk migration). It allows the dynamic configuration of resources used for the refresh process for a minimal impact on parallel production. It retains all SAM file attributes and provides extensive log and status information. Because this process is fully automated, administration overheads are mostly eliminated.

SAM-Watch

This modul allows monitoring by control scripts based on a core monitoring tool, e.g. Nagios. Proactive checks (e.g. status of filesystems, status of SAM devices and VSNs, process activities, performance, VSN pool filling levels, damaged copies and media, and many more) mean higher availability and shorter service times. Besides the information of your monitoring tool SAM-Watch allows additional messaging to you (via mail, sms, pager,...). You can define watermarks, and when a message should be generated.

HSM Migration Toolkit Interface allows the fast migration of very large data volumes **from foreign HSM systems** like Amass, DMF, UniTree (EMC), Veritas (Symantec), etc. directly into SAM-QFS (bulk migration). This is accomplished by a two strep process. First, the meta-data from the foreign HSM application (one-time only) is converted into a SAM-QFS directory structure. Then, the files are made available for read only via the SAM-QFS file system. From this point forward, access to files on the foreign HSM tapes is done solely via SAM-QFS without requiring to run the foreign HSM software nor systems any longer.



SAM-WeB allows SAM-FS **queries** and their results via a WEB-GUI. These queries are based on the last SAM-FS **dumps** and are more functional and powerful than "sfind". The extractor is strongly optimized and it takes **less than 2 minutes** for 10 mio. files. You will also be able to see the number of files, their paths, links, and the total capacity.

Capacity and Performance Enhancements practices are part of HMK's offers. Via our **professional services**, products, infrastructures evaluations, and optimized storage concepts, we can drastically help to **improve performance** for file access, restoration of data, and disaster recovery procedures. Our expert concepts can also provide an ideal base for optimum file access and other infrastructure enhancements, improving return on investment and lowering cost of ownership.

SAM-Backup Caching optimizes the tape control and throughput of backup software (e.g. Veritas NBU or Legato Networker) by disconnecting tape devices from the network. In addition, features like tape streaming, bundling of backup streams, and creation of several copies (auto cloning) at the same time further increases backup functionality. Reconstruction of data happens transparently whether data is in use or not. In the event that one copy is in use, it will restore automatically from the second copy.

About HMK Computer Technologies GmbH

HMK Computer Technologies GmbH was founded in 1995 by Dipl.-Ing. Helmut Mühl-Kühner in Kronberg near Frankfurt/Main. For more than 10 years HMK has been working together with strategic partners in the area of storage and data management.

Our target market lies in Germany, the core countries in Europe, and the USA. A side from our headquarter in Kronberg there are four other offices in Germany. The goal is to keep increasing data volume affordable to your requirements for your day-to-day business or against loss and ensure it is available at all times.

We assist you with the conception, choice of product and implementation of overall solutions.

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