



DSI DataArk

The Long-term Repository for Mainframe Tape Data

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The Need for Efficient Solutions

Many vendors such as HP/EDS, Micro Focus, Microsoft, Accenture, and CSC offer Mainframe Migration services which move mainframe applications to midrange platforms by either emulating the mainframe applications on the midrange or rewriting them using new technologies such as .Net or JEE.

Many such projects involve large amounts of legacy data on tape and other non-disk media. Generally the modernization vendors will migrate the active data, which consists of databases and VSAM. However, the “migration” of tape archives has its own set of special problems, not the least of which is the fact they are often huge - in the order of tens or hundreds of terabytes.

This requires a strategy that, while allowing the decommissioning of the mainframe and its legacy tape libraries, guarantees efficient long-term management of and access to all the legacy data.

Data Strategies Int'l, an innovative solutions provider, is responding with new technologies and products to address these requirements.

What Is Mainframe Tape Data?

Mainframe applications store data primarily as Datasets residing on Tape Volumes. Tape Volumes can be on physical magnetic tapes of various technology and format or, more recently, can reside inside virtual tape libraries (VTLs) using a combination of tape and disk storage technology.

The format of Datasets and Tape Volumes has been defined by industry standards developed in

parallel with mainframe hardware and operating systems.

These standards enable a uniform approach to data access and management, and provide support for the exchange of information on interchange media.

The large quantity of tapes generally handled in a data center has forced the development of a number of sophisticated tools known as Tape Management Systems (TMSs). These tools interact with the mainframe Operating System and maintain a rich database of information about Tape Volumes and Datasets.

The TMS is what make possible the management of tens of thousands of tapes and hundreds of thousands of datasets. Its function is essential both inside and outside the mainframe environment.

Why A Repository for Mainframe Tape Data?

A repository for mainframe tape data is a combination of equipment and software tools that operates outside the mainframe environment to provide long-term storage, access, and management of “migrated” legacy tape data.

The cost of the equipment for the repository, combined with the cost of “migrating” the data from the legacy tapes to the new storage, is only a fraction of what would cost keeping in operation the mainframe tape environment. Typically one can achieve a one-year ROI.

In addition, the software for the repository must provide the same “tape” management capabilities offered by the mainframe TMS, including a GUI to the database, and support for high-level access to the repository contents.

The DataArk Appliance

The DataArk Appliance is a new Data Strategies product specifically created to provide a long-term repository for mainframe tape data outside the mainframe environment.

First, the metadata from the mainframe OS Catalog and Tape Management System (TMS) is preserved by moving it into the DataArk Appliance Database.

Then, the mainframe data from tapes is “migrated” to the DataArk Appliance by creating virtual tapes (compressed AWS files) that are stored in one of three optional data storage subsystems supported by the appliance, namely: NAS disk storage, high-density magnetic tapes, or the cloud.

While a storage appliance is not a new concept, placing the mainframe System Catalog, Tape Management System database, and Virtual Tape storage management on the appliance device is new and provides complete mainframe tape storage virtualization to applications hosted on midrange platforms.

With the DataArk Appliance the connection between application and legacy tape data is raised to the level of the Virtual Tape (or Dataset) access protocol, thus allowing maximum flexibility with respect to storage implementation, optimization, security, and upgrading.

What Is An Appliance?

“It is a combination of hardware, software, and networking technologies in a single box designed for a specific purpose.”

An appliance simply plugs into the network to autonomously perform a function that would have

otherwise required a deep application involvement.

The advantages of the appliance model can be identified as:

- Simplified resource management
- Improved performance
- Better security
- Simpler installation and provisioning
- Easier technology upgrading
- Improved reliability
- Better pricing

How Does Data Access Work?

The DataArk Appliance offers several data access modes, namely:

- Tape Volume Level Access. Archived virtual tapes can be read, copied, etc.
- Raw Dataset Level Access. Datasets can be “extracted” from archived virtual tapes and “moved” to the appliance’s Working Disk Storage.
- Dataset Record Level Access. Datasets residing in the appliance’s Working Disk Storage can be read at the record level in accordance with the format of the original mainframe dataset.

Optionally, the DataArk Appliance is also capable of providing data storage management functions similar to the mainframe HSM.



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