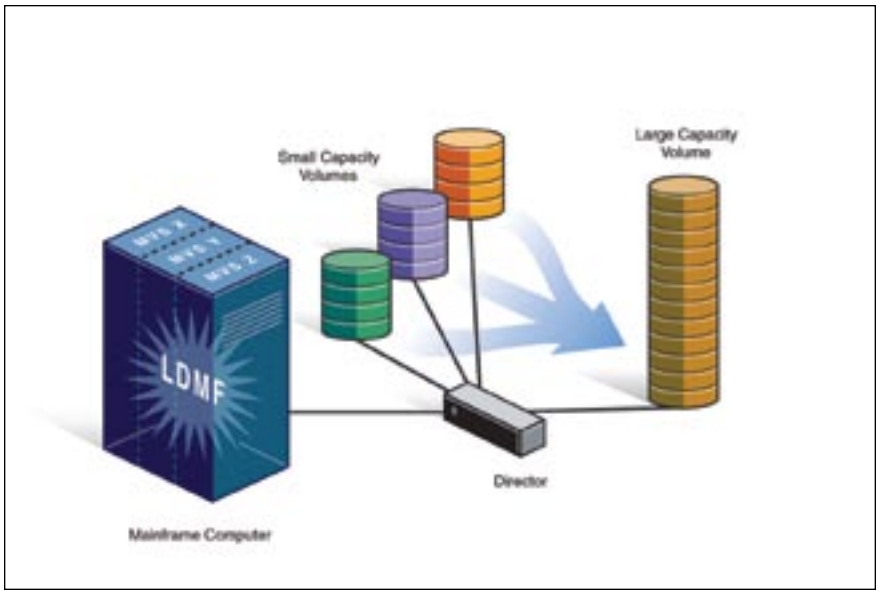
Automate data set–level migration for increased efficiency and data availability

IBM Migration Services for data – Softek LDMF



With the Softek LDMF offering, data sets residing on three smaller capacity volumes can be combined onto one large capacity volume.

Highlights

- ***Maintain application availability during data set–level migrations***
- ***Merge small capacity volumes onto large capacity volumes***
- ***Enable continued growth of important or new applications***
- ***Reduce storage total cost of ownership (TCO)***
- ***Improve application data set performance***
- ***Move data sets between virtually any storage vendor hardware***

IT organizations looking to take advantage of large capacity volumes on today's high-performance storage subsystems are faced with complex and disruptive data conversions that have a negative effect on business applications.

The IBM Migration Services for data – Softek® LDMF™ (Logical Data Migration Facility) offering, gives you the ability to consolidate data onto large capacity, better-performing volumes without interruption to the 24×7 business environment.

Softek LDMF

Manual data set–level migration is complex, disruptive and error prone. Even the use of various utilities to move data sets requires that the data sets be closed, which also disrupts business operations.

By using the Softek LDMF offering—an online data set–level migration product—mainframe organizations that cannot afford the downtime usually associated with data set–level migrations are now able to perform migrations while data sets remain open, supporting mounting service-level pressures from the business.

Extend growth of application data

With the Softek LDMF offering, volumes can be combined, freeing up unit control blocks (UCBs) to allow continued growth of business-critical information. Its nondisruptive migration capability is designed to avoid interference with the demands of business service levels—all the while helping to ensure complete data integrity.

Migrate data sets to meet storage deployment goals

Making decisions about which application data sets to move to specific locations on new storage presents major challenges to most IT organizations:

- *Extensive planning and preparation are required.*
- *Conversion of data onto large volumes takes weeks to complete.*
- *Significant application downtime is required, which can mean the inability to meet business service level agreements (SLAs).*

Many organizations want to take advantage of new storage technology to leverage larger capacity volumes. With the Softek LDMF offering, applications' data sets can be quickly migrated from small capacity volumes and merged onto larger capacity volumes—while applications remain online and available. The Softek LDMF offering can also automatically update the volume metadata and catalog information, allowing organizations to accomplish tasks they were not previously able to accomplish without scheduling significant downtime.

Although nondisruptive migration solutions exist in the marketplace today, these solutions migrate data at a volume level, which doesn't address the business need to move individual data sets. The Softek LDMF offering solves these storage deployment issues by providing the following key benefits:

- *Wild card searches for application data sets to minimize migration preparation time*
- *Conversion of data onto larger capacity volumes and disk drives in hours, for faster adoption of new storage technology*
- *Online data set movement and automatic update of volume metadata and catalog, while applications remain available and active*

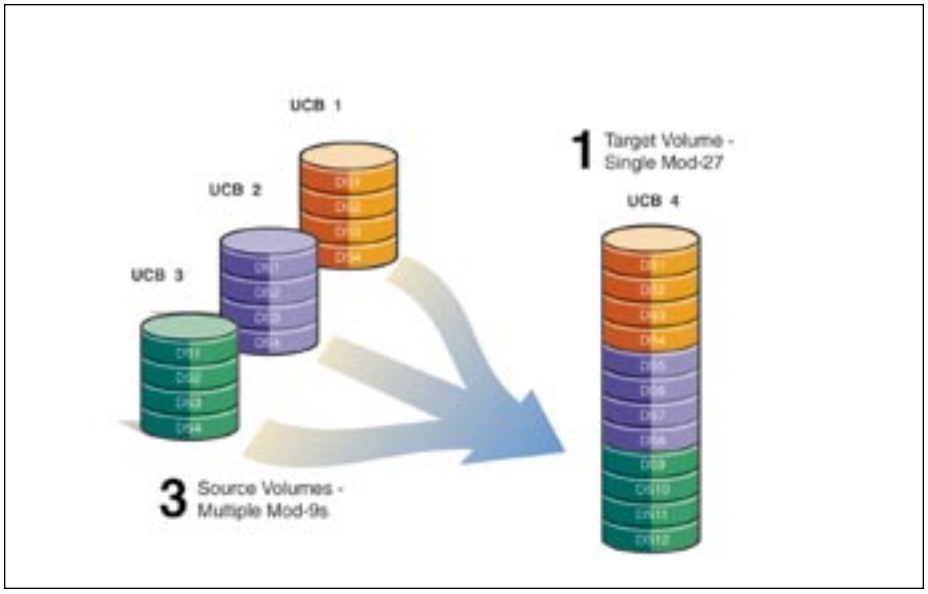
Data set consolidation for greater return from storage investments

Consolidating data provides benefits for optimizing and protecting investments in

both new and existing storage subsystems. Using the Softek LDMF offering, smaller volume subsystems can be retired and replaced with one larger volume subsystem, lowering management costs for the new environment. This conversion, which can happen without affecting the availability of applications to end users, also allows for faster adoption of the higher capacity volumes and disks, enabling applications to quickly leverage the new storage technology.

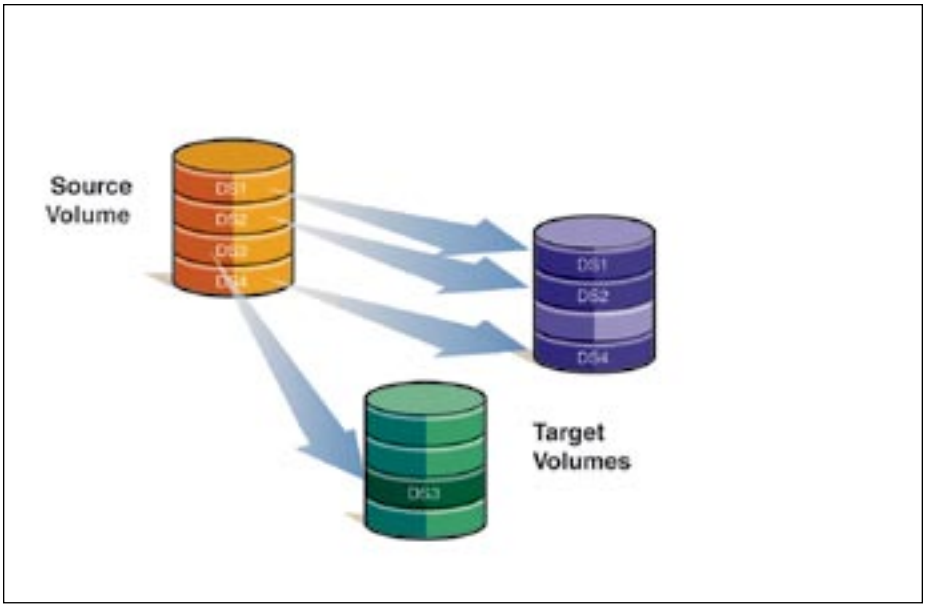
Although some application data sets may need to be merged onto larger volumes to take advantage of their additional capacity, this conversion may leave behind storage that has not yet fully depreciated. The remaining storage can either be repurposed for consolidating other applications, or it can become a lower tier of storage to meet regulatory compliance demands.

The Softek LDMF offering provides greater return from storage investments by providing:



Reclaim three UCBs by combining three small volumes into one larger volume for continued application growth.

- *Retirement of existing storage by merging small volumes onto large volume subsystems*
- *Reduced cost to manage fewer storage subsystems*
- *Additional capacity by consolidating data sets onto large volumes*
- *Repurposing of existing storage by moving data sets based on storage tiers.*



Improve application performance by relocating data sets to better-performing volumes.

Relieve UCB constraints to increase system growth

Mainframe UCB limits put a constraint on data growth, forcing IT to continually disrupt the business to relocate data sets. By moving and consolidating data sets from multiple smaller volume subsystems to larger volume subsystems, hundreds of UCBs can be reclaimed

Softek LDMF features, functions and benefits		
Feature	**Function**	**Benefit**
Diversion	Automatically diverts input/output (I/O) to new location	Allows data migration without disruption
Storage vendor independence	Host-based software migrates data sets across leading storage environments	Supports flexibility in vendor choice when conducting a technology refresh
Suspend/resume	Indefinitely suspends migration of data set groups; with a resume command, the group is eligible and revalidated for migration again	Provides optimum flexibility around start/stop of migration process for planning or validation purposes
Flexible migration options	Provides control over I/O rate for reads/writes	Enables online migration activity while maintaining optimal application performance and service levels
Data set grouping	Enables a group of data sets to be collectively migrated	Easier management of large migrations
Robust interface	Fully functional Interactive System Productivity Facility (ISPF) screens	For easier configuration, monitoring and operation
Resilient architecture	Current state of migration is maintained, regardless of graceful or nongraceful shutdown, to ensure continued recoverable migration	Migration process continues in event of server shutdown and restart
Enterprise scalability	Enables data integrity in large enterprise environment	Accommodates growth rates in alignment with business needs

Softek LDMF specifications
Operating systems
The Softek LDMF offering supports all IBM MVS™ software-based operating systems that are currently supported by IBM (for example, IBM z/OS® Version 1.4 software and above)
Storage hardware
All 3380 and 3390 z/OS formatted volumes supporting Count Key Data/Extended (CKD/E) format

and used to support new business expansion initiatives. The Softek LDMF offering provides increased system growth by:

- *Reducing the number of logical volumes on a device by consolidating several small capacity volumes onto fewer large capacity volumes*
- *Reclaiming hundreds of UCBs by moving to large volume subsystems.*

Storage load balancing to improve application performance

IT staff monitor their storage usage and activity on a daily basis to keep application performance as high as possible.

When required, storage administrators have to move data sets between storage units, volumes or both, based on the I/O activity, which requires downtime for the application. The Softek LDMF offering can migrate specific data sets off of poor performing volumes to higher performing volumes, enabling higher application performance levels.

The Softek LDMF offering provides increased application performance by:

- *Enabling relocation of selected data sets when needed, without affecting the application*
- *Moving data sets in real time, while they are open and being accessed.*

How data set–level migration with the Softek LDMF offering works

Separate migration groups can be created in the Softek LDMF offering. Each migration group can include a list of data sets that were created using wild cards. After the migration group is created, specific data sets can be excluded. Target volumes are then identified as the destination for the data set migration. Target volumes can be specifically named or defined by Storage Management Subsystem (SMS) group.

Once activated, the Softek LDMF offering will copy designated data sets to the target volume while the application is up and running. IT staff does not have to schedule downtime for applications, helping to ensure continuous operations in support of business continuance objectives. The entire data migration can be performed through the mainframe and not through any storage subsystem.

Reduce risk during migration

Manual migration requires extensive manual work and planning, such as creating control cards for all data sets and ensuring that enough space exists

for migration. Manual migration operations risk overlooking a critical data set and running out of space on the target volumes during migration. Such problems can cause data corruption or data loss. The Softek LDMF offering does not require the manual creation of control cards and allows the use of wild cards for data set selection. Furthermore, the Softek LDMF offering can validate that there is enough space on the target volumes prior to starting the migration, helping to reduce the risk of running out of space.

The Softek family of products from IBM

The Softek family of products from IBM provides multiplatform, heterogeneous data availability solutions that enable companies to see, move and recover data nondisruptively, regardless of server platform or storage vendor. Since 1996, these data migration, data replication and storage resource management solutions have helped more than 700 enterprise clients improve data availability, while reducing the risk, cost and complexity associated with optimizing multivendor storage infrastructures.

For more information

To learn more about the IBM Migration Services for data – Softek LDMF offering, visit:

ibm.com/services/us/index.wss/offering/its/a1025736

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