

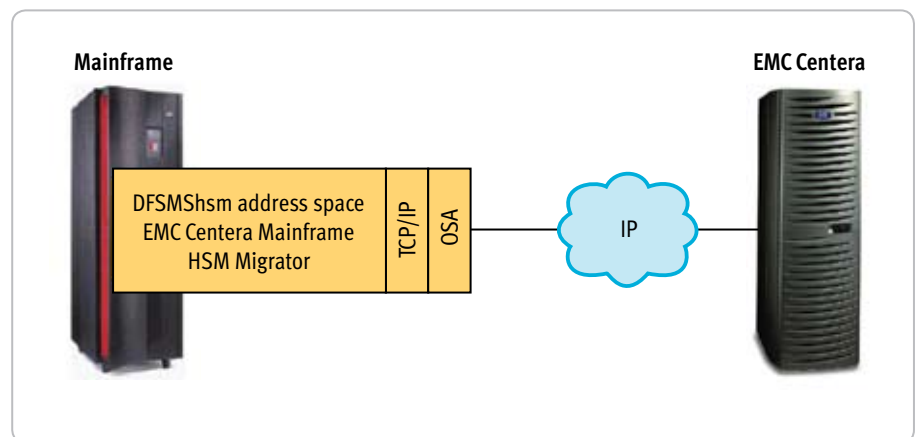
EMC Centera Mainframe HSM Migrator

Extend IBM DFSMSHsm with EMC Centera online archiving

The Big Picture

- Native EMC Centera connectivity with the DFSMSHsm migration and recall makes archiving to EMC Centera extremely simple
- End-to-end EMC solution with EMC support to provide superior service levels for mission-critical operations
- Elimination of MIPS associated with Recycle to improve system efficiency
- Utilize EMC Centera advanced replication technologies for disaster recovery
- Completely transparent operation
- Cost-effective archival and improved business continuity
- Quickly access multiple terabytes of migrated data

EMC® Centera® Mainframe HSM Migrator is a software module that runs on z/OS mainframes. The software enables EMC Centera® to “plug in” to DFSMSHsm® (Data Facility Storage Management Subsystem) and use standard user exits for archiving data to EMC Centera. EMC Centera mainframe HSM Migrator intercepts datasets and stores them on EMC Centera. Recall is completely transparent to the end user or application.



Customers utilize the EMC Centera Mainframe HSM Migrator running on z/OS to intercept HSM migrated datasets traditionally targeted for ML 2 (tape) storage and archive them directly to EMC Centera. Recall of these datasets will be completely transparent to batch processes requiring access to these datasets. The end result allows EMC Centera to become a seamless piece of the DFSMSHsm infrastructure.

The product was designed using public APIs published and supported by IBM. The EMC Centera Mainframe HSM Migrator is sold and supported by EMC as a purpose-built extension of DFSMSHsm. Archiving to EMC Centera allows users to take advantage of EMC Centera content-addressed storage for efficient data storage and assured content authenticity. For a consolidated and unified archive, EMC Centera’s object-based storage greatly mitigates reliability and performance problems typically experienced with tape.

Customer demand for increased disk capacities is growing as the volume of data grows exponentially. At the same time, there is cross-industry emphasis on cost containment, increasing operational efficiency, and enhancing customer service by making information more easily accessible. EMC Centera was purpose-built to address these issues by implementing an active, online archive with a system that is self-managing, self-healing, and self-monitoring.

The EMC Centera Mainframe HSM Migrator is a solution for companies or organizations with multi-terabyte HSM infrastructures typically found in industries such as financial services, manufacturing, and health services. Hierarchical storage management gives customers the ability to automate critical processes relating to the media on which data is stored and reduce storage media and administrative costs. Any organization that migrates large volumes of data that will be deleted periodically will also benefit.

Customers with strict governance or compliance issues can utilize EMC Centera for read-only copy of their archived datasets. In addition, EMC Centera offers a solution for those needing a cost-effective replication solution for their archived datasets for business continuity and disaster recovery.

Benefits

By eliminating the use of tape as an archive for ML1 data, EMC Centera HSM Migrator increases the effectiveness of DFSMSHsm in a number of areas.

Performance

Large environments are subject to excessive time requirements for the Recall operation. EMC Centera HSM Migrator eliminates tape mount and positioning thus streamlining the Recall process.

Recycle

The Recycle process consumes expensive mainframe resources (MIPS). EMC Centera can eliminate this bottleneck by providing virtually unlimited ML1 storage.

Disaster recovery and compliance

Potential compliance issues are introduced as data is moved from tape to tape for the efficient management of tape capacity. EMC Centera replication ensures that archived data is available online, which greatly simplifies data requests for corporate governance or regulatory requirements and is a superior solution for disaster recovery.

Features

DFSMSHsm integration

- MIGRATE and RECALL functions are supported for all VSAM and non-VSAM-supported datasets.
- Individual datasets can be deleted in order to eliminate the RECYCLE process and reduce the number of MIPS consumed.
- The EMC Centera Mainframe HSM Migrator is customer-installable and supports SMP/E.

Performance and resource utilization

- Concurrent processes: The EMC Centera Mainframe HSM Migrator does not impose any limitations when running multiple migration processes and fully supports the MIGRATE and RECALL processes of DFSMSHsm.
- Datasets recalled from EMC Centera do not face the limitations of physical tape mounts.
- DFSMSHsm command simulation: Commands within EMC Centera Mainframe HSM Migrator have been designed to simulate many HSM commands, greatly reducing the time to “learn” the software.
 - An administrator can quickly determine where a dataset has been migrated (ML1 or EMC Centera) using commands similar to HSM commands.
 - An administrator can also issue a command to migrate datasets directly to EMC Centera without interfacing with DFSMSHsm. This increases performance since migration is not running within the DFSMS address space.

High availability

- The EMC Centera Mainframe HSM Migrator is fully supported in a Parallel Sysplex Environment.
- Backup support: The EMC Centera HSM Migrator can be optionally configured to migrate data to EMC Centera only if a backup exists for the dataset.
- Recovery of control store from metadata: In the event that the control store is lost, it can be rebuilt from the contents of metadata stored within EMC Centera.
- Remote replication: Using EMC Centera's remote replication capabilities, all data archived to EMC Centera can be asynchronously replicated to a secondary EMC Centera system at a remote disaster recovery location where it can be immediately accessible.

System management

- The ISPF Status Panel provides realtime insight to HSM Migrator operation. It reports on datasets being migrated, datasets being recalled, datasets being deleted, as well as datasets in the recall queue. It also gives a status of the EMC Centera Mainframe HSM Migrator commands that have been completed.
- MIGRATE and RECALL logging: Full activity logs show all MIGRATE and RECALL actions regardless of success or failure.
- Reporting: Some examples of reports available through EMC Centera Mainframe HSM Migrator include:
 - HSM Migrator Activity Report
 - Deferred Migration Report
 - Active Migration Report
 - Delete Reports
 - Audit Extract Reports
 - Error Reports
 - And more

In addition, an extract feature can be used to interface with external reporting such as MXG and SAS. The Extraction facility allows creation of a flat file image containing information on all EMC Centera managed datasets. This feature can be used to monitor system implementation to ensure datasets are being migrated correctly, summarize daily activity, study dataset usage patterns, and provide information for chargeback.

Deferred migration

This feature allows an installation to leave migrated datasets on Level 0 storage until the migrated information has been replicated by EMC Centera. Data can be written to the primary EMC Centera cluster and asynchronously, the EMC Centera will copy this information to another EMC Centera. With the Deferred Migration feature, one can defer removal of the Level 0 dataset contents until the HSM Migrator has verified that the corresponding datasets on EMC Centera storage have been replicated on a remote EMC Centera Cluster. This feature is only available for non-VSAM datasets.

Service/warranty

- 24x7 global support is available for EMC Centera Mainframe HSM Migrator.
- 90-day warranty.
- An annual maintenance contract is available.

System requirements

- z/Series mainframe
- IBM z/OS V1.6, V1.7, and V1.8
- DFSMSHsm and DFSMSdss V1.6, V1.7, and V1.8
- TCP/IP access from the mainframe to an EMC Centera Cluster
- EMC Centera with EMC CentraStar® V2.4 or higher
- 100 MB DASD for EMC Centera Mainframe HSM Migrator install media
- DASD for EMC Centera Mainframe HSM Migrator Control Store



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