



z/OS Operating System

DFSMSdfp OAM

Transitioning data from optical guide

@business on demand software

© 2009 IBM Corporation

This education topic provides a guide for transitioning both primary and backup data off of optical media within DFSMSdfp OAM.

Agenda

- Transition primary data from 3995 optical to tape
- Transition primary data from 3995 optical to DASD (DB2®)
- Migrate OAM backup data from 3995 optical to tape

This presentation will discuss how to transition OAM primary data from 3995 optical media to both the tape and DASD storage hierarchies. In addition, it will also discuss how to transition OAM backup data currently stored on 3995 optical media to tape.

This document is not meant to be a comprehensive guide to transitioning data, but rather a set of steps that may need to be undertaken to remove data from the optical storage hierarchy in OAM. Before proceeding, it is recommended that an SMS storage specialist and a DB2 administrator be involved in the planning process to ensure appropriate supervision of the following processes.

Transitioning primary data from optical to tape

1. Create a new management classes with either transition criteria or expiration criteria that will cause OSMC to assign a pending action date to a point in time in the future.
2. Modify the management classes currently assigned to the objects being transitioned to have a transition criteria of zero days from object creation date.
3. Create or validate the existence of an object tape storage classes that specifies an IART value greater than 0 and a SDR value greater than or equal to 3.
4. Make changes to the SETOAM statement in the CBROAMxx PARMLIB member, as appropriate (at both the global and storage group level).
5. Modify the ACS routines in the CTRANS environment for the new class transition from the existing management class/storage class to the new management class/storage class.
6. Modify the ACS routines in the ALLOC environment to direct the object tape data set 'OAM.PRIMARY.DATA' to the appropriate tape library storage group. The tape library names specified in the tape library storage group will be the destination of the objects being transitioned.
7. Update existing objects pending action date (with OSREQ or DB2 SPUFI) to cause OSMC transitioning to occur when the storage management cycle is run.

Step 3: IART refers to Immediate Access Response Time. SDR refers to Sustained Data Rate.

Step 4: The SETOAM statement controls OAM object tape related settings at both the global and storage group level. STORAGEGROUP keywords such as TAPEUNITNAME and DATACLASS would need modification. In addition, to prevent your tape management system from managing and expiring OAM's object tape volumes, use the appropriate NEVER EXPIRE DATE from your tape management system as the tape volume's expiration date (also refer to the SETOAM TAPEEXPIRATION keyword). This leaves the management of the object data and of the tape volume to OAM. See z/OS® DFSMS OAM Planning, Installation, and Storage Administration Guide for Object Support (SC35-0426) for more information.

Step 5: The new management class refers to the management class created in step 1. The new storage class refers to the storage class in step 3.

Step 6: With z/OS Release V1R7 and higher, an enhancement was made available which allows the object storage group name to be appended to the object tape data set names: 'OAM.PRIMARY.DATA', 'OAM.BACKUP.DATA' and 'OAM.BACKUP2.DATA'. If the DSNWITHSGNAME keyword is specified in the SETOAM statement in CBROAMxx PARMLIB member, the updates to the ACS routines in the ALLOC environment must reflect this additional low level qualifier in the 'OAM.PRIMARY.DATA' dataset name. An alternative option is to specify a wildcard low level qualifier such as: 'OAM.PRIMARY.DATA.*'.

Step 7: As part of the planning process, it must be determined if the updates to the pending action dates will be made at an object, storage group, or volume level. This decision will affect how long the long the storage management cycle runs.

Transitioning primary data from optical to DASD (DB2)

1. Create a new management classes with either transition criteria or expiration criteria that will cause OSMC to assign a pending action date to a point in time in the future.
2. Modify the management classes currently assigned to the objects being transitioned to have a transition criteria of zero days from object creation date.
3. Create or validate the existence of an storage classes that specifies an IART value of 0.
4. Modify the ACS routines in the CTRANS environment for the new class transition from the existing management class/storage class to the new management class/storage class.
5. Update existing objects pending action date (with OSREQ or DB2 SPUFI) to cause OSMC transitioning to occur when the storage management cycle is run.

Step 3: IART refers to Immediate Access Response Time.

Step 4: The new management class refers to the management class created in step 1. The new storage class refers to the storage class in step 3.

Step 5: As part of the planning process, it must be determined if the updates to the pending action dates will be made at an object, storage group, or volume level. This decision will affect how long the long the storage management cycle runs.

Migrate OAM backup data from 3995 optical to tape

1. Update the appropriate SETOAM and SETOSMC statements in the CBROAMxx PARMLIB member to direct the object tape backup data sets 'OAM.BACKUP.DATA' and 'OAM.BACKUP2.DATA' to the appropriate tape devices, media types, and recording technology.
2. Utilize one of the following methods to migrate the data:
 1. Use the OAM MOVEVOL utility for each optical volume that contains backup data.
 2. Create new object backup copy during the storage management cycle (OSMC):
 1. Make an image copy of the OAM Object Directory table.
 2. Clear the existing VOLSER in the ODBKLOC and ODBK2LOC fields in the object directory table (with DB2 SPUFI).
 3. Clear the existing backup copy location token in the ODBKSEC and ODBK2SEC fields in the object directory table (with DB2 SPUFI).
 4. Modify the object's pending action date to today's date.
 5. Run the storage management cycle (OSMC) to create the new backup copies on tape.

Step 1: The SETOAM statement controls OAM object tape related settings at both the global and storage group level. STORAGEGROUP keywords such as TAPEUNITNAME and DATACLASS would need modification. In addition, to prevent your tape management system from managing and expiring OAM's object tape volumes, use the appropriate NEVER EXPIRE DATE from your tape management system as the tape volume's expiration date (also refer to the SETOAM TAPEEXPIRATION keyword). This leaves the management of the object data and of the tape volume to OAM. See z/OS DFSMS OAM Planning, Installation, and Storage Administration Guide for Object Support (SC35-0426) for more information.

Also note that with z/OS Release V1R7 and higher, an enhancement was made available which allows the object storage group name to be appended to the object tape data set names: 'OAM.PRIMARY.DATA', 'OAM.BACKUP.DATA' and 'OAM.BACKUP2.DATA'. If the DSNWITHSGNAME keyword is specified in the SETOAM statement in CBROAMxx PARMLIB member, the backup dataset names will have an additional low level qualifier.

Step 2.2: As part of the planning process, it must be determined how many objects will have new backups created during an storage management cycle. This step can be done at an object, storage group, or volume basis. The number of objects having new backup copies created will affect the length of the storage management cycle.

Publications

- *z/OS DFSMS Object Access Method Planning, Installation, and Storage Administration Guide for Object Support (SC35-0426)*
- *z/OS DFSMS Object Access Method Planning, Installation and Storage Administration Guide for Tape Libraries (SC35-0427)*
- IBM Education Assistant presentation: “OAM Object Support and ACS Routines”

Refer to the publications listed for additional information.

Feedback

Your feedback is valuable

You can help improve the quality of IBM Education Assistant content to better meet your needs by providing feedback.

- Did you find this module useful?
- Did it help you solve a problem or answer a question?
- Do you have suggestions for improvements?

Click to send e-mail feedback:

mailto:iea@us.ibm.com?subject=Feedback_about_V1R10_DFSMS_OAM_Optical.ppt

This module is also available in PDF format at: ..\V1R10_DFSMS_OAM_Optical.pdf

You can help improve the quality of IBM Education Assistant content by providing feedback.

Trademarks, copyrights, and disclaimers

IBM, the IBM logo, ibm.com, and the following terms are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both:

DB2 IBM z/OS

If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of other IBM trademarks is available on the Web at "Copyright and trademark information" at <http://www.ibm.com/legal/copytrade.shtml>

Access, and the Windows logo are registered trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.

Product data has been reviewed for accuracy as of the date of initial publication. Product data is subject to change without notice. This document could include technical inaccuracies or typographical errors. IBM may make improvements or changes in the products or programs described herein at any time without notice. Any statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only. References in this document to IBM products, programs, or services does not imply that IBM intends to make such products, programs or services available in all countries in which IBM operates or does business. Any reference to an IBM Program Product in this document is not intended to state or imply that only that program product may be used. Any functionally equivalent program, that does not infringe IBM's intellectual property rights, may be used instead.

THE INFORMATION PROVIDED IN THIS DOCUMENT IS DISTRIBUTED "AS IS" WITHOUT ANY WARRANTY, EITHER EXPRESS OR IMPLIED. IBM EXPRESSLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT. IBM shall have no responsibility to update this information. IBM products are warranted, if at all, according to the terms and conditions of the agreements (for example, IBM Customer Agreement, Statement of Limited Warranty, International Program License Agreement, etc.) under which they are provided. Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products in connection with this publication and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products.

IBM makes no representations or warranties, express or implied, regarding non-IBM products and services.

The provision of the information contained herein is not intended to, and does not, grant any right or license under any IBM patents or copyrights. Inquiries regarding patent or copyright licenses should be made, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. The actual throughput or performance that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput or performance improvements equivalent to the ratios stated here.

© Copyright International Business Machines Corporation 2009. All rights reserved.

Note to U.S. Government Users - Documentation related to restricted rights-Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract and IBM Corp.