IBM Education Assistance for z/OS V2R1

Item: Tape Infrastructure Enhancements
Element/Component: DFSMShsm

Material is current as of June 2013

Agenda

- Trademarks
- Presentation Objectives
- Overview
- Usage & Invocation
- Migration & Coexistence Considerations
- Appendix

Trademarks

- See url http://www.ibm.com/legal/copytrade.shtml for a list of trademarks.

Presentation Objectives

- This presentation will cover the changes introduced by the Tape Infrastructure Enhancements item.

Overview

- Problem Statement / Need Addressed
  - DFSMShsm migration and backup data sets can span up to a maximum of 40 tape volumes. Since the size of a virtual tape is limited to 6 GB, DFSMShsm cannot migrate or back up data sets larger than 600 GB to virtual tape volumes (assuming 2.5:1 compaction).
- Solution
  - Extend the maximum number of volumes that a migration or backup tape data set can span from 40 to 254 volumes.
    - Existing DFSMShsm architecture prevents the limit from being extended to the *Allocation* limit of 255 volumes.
  - Allow Recycle to process connected sets of up to 254 volumes.
- Benefit / Value
  - This allows migration and backup of larger data sets, which is particularly useful when using the typically small tape volume sizes configured for virtual tape subsystems.

Invocation

- None: DFSMShsm will automatically span up to 254 tape volumes during data set migration, backup, and recycle.

Usage

- FSR records have been extended from a maximum of 1260 bytes in length to 6396 bytes in order to contain up to 508 volume serials (254 input and 254 output).
- FSRs that list more than 144 tape volumes will be truncated when written to the DFSMShsm LOG log data sets.
  - The existing fixed length 2048 LRECL prevents FSRs with more than 144 volumes from being written to the DFSMShsm log data sets in their entirety.
- Truncated FSRs will affect ARCPRLOG and ARCPEDIT output
  - ARCPRLOG output will display only the portion of each FSR that was written to the log.
  - When RECYCLE volumes are truncated, ARCPRLOG and ARCPEDIT output will display “TOVOL=******”.

Migration & Coexistence Considerations

- Migration Considerations: None
- Coexistence Considerations
  - Coexistence APARs OA36293 (V1R13) and OA36294 (V1R12) must be applied.
  - Coexistence support will allow pre-V2R1 DFSMShsm hosts to process (RECALL, RECOVER, AUDIT, etc.) migration and backup data sets that span up to 254 tape volumes.
  - Migration and backup of data sets that span more than 40 tapes, and recycle of connected sets of more than 40 tapes will continue to fail (or be skipped) on pre-V2R1 systems.

Appendix

- *z/OS V2R1 DFSMShsm Storage Administration*
- *z/OS V2R1 DFSMShsm Implementation and Customization Guide*
- *z/OS V2R1 MVS System Messages, Volume 2 (ARC-ASA)*