z/OS 3.2 IBM Education Assistant

Solution Name: RMM EXPDT Enhancements - WhileCatalog(Only)

Solution Element(s): zOS DFSMSrmm

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Agenda

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Trademarks

- See url http://www.ibm.com/legal/copytrade.shtml for a list of trademarks.
- Additional Trademarks:
  - None.

Objectives

- Introduce using Catalog control as primary retention decision driver for RMM tape datasets using EXPDT

  - Decoupling the the expiration date from RMM retention criteria

- Demonstrate how this feature is another step towards device independence

  - Setting retention attributes for all storage tiers within a single solution

- Show changes within RMM or SMS and ISMF to achieve these goals

Overview

- Who (Audience)
  - RMM users with SMS environments

- What (Solution)
  - Add Catalog as primary expiration processing for datasets and volumes that are managed by the EXPDT retention method

- Wow (Benefit / Value, Need Addressed)
  - Bring Catalog Control to EXPDT datasets, which allows greater platform unity especially regarding controlling retention of GDG datasets
    - Allows GDGs with many different expiry dates are all handles uniformly as they roll out of the GDG base
  - Management Class attribute specific to RMM to allow centralized interface for expiration and retention decisions
  - Allows greater adoption of EXPDT as a simpler and more efficient offering over VRSEL
    - Matches functionality of VRSEL datasets with IGNORE EXPIRY DATE=YES and WHILECATALOG=YES options, allowing datasets managed with these attributes to move to EXPDT

Usage & Invocation - RMM (1)

- RMM has put multiple invocation strategies in place for Retain While Cataloged (ONLY) in order of priority
  - SMS application – Management Class parameter
  - RMM logic application – EDGDEFxx default statement
  - Default setting – EDGRMMxx parameter

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  - Within Retention Method: EXPDT options, new parameter of WHILECATALOG:
    - RM(EXPDT(WHILECATALOG(ONLY)))

- RMM logic application – EDGDEFxx default statement
  - Use the WC(ONLY) attribute for selection criteria wanted for this setting
    - DEFAULT DSN(**.G%%%%V%%) JOB(*) KEYDATE(*) PGM(*) RM(EXPDT) WC(ONLY)
  - Example above to catch all GDG datasets and set them with the new parameter to leverage catalog status as primary retention driver.

Usage & Invocation – ISMF & SMS

- The easiest way to use this feature for SMS is through ISMF defining/altering of Management Class attributes

- If using SMS to drive retention for other storage tiers, this enables further retention management for Tape data through SMS only, potentially reducing complexity of your environment

- By default, the last panel within the Management Class panels is RMM specific, which contains the "Retain While Cataloged" field with a new parameter "ONLY"

```
DGTDCMC9                        MANAGEMENT CLASS                     Page 8 of 8
Command ===>  _

SCDS Name . . . . . . . :
Management Class Name :

To   Management Class, Specify:

 Tape Volume Attributes
   Retention Method   . . . .              (VRSEL, EXPDT or blank)
   Volume Set Management Level              (VOLUME, FIRSTFILE, SET or blank)


 Tape Data Set Attributes
   Exclude from VRSEL  . . . .              (Y, N or blank)
   Retain While Cataloged  . .              (ON, OFF, UNTILEXPIRED, ONLY or
                                            blank)
```

See Help Panels

Usage & Invocation - RMM (2)

- What happens when an RMM dataset with WHILECATALOG(ONLY) flag is uncataloged?
  - RMM flags the dataset to start a countdown as indicated in EDGRMM parameter CATRETPD
    - WC(ONLY) flag gives catalog exclusive control for expiration of the indicated dataset that is Retention Method: EXPDT
    - Datasets will be flagged for expiration regardless of expiration date set (including permanent expiration date)

  - Once the value for CATRETPD is reached, the dataset is available to be expired when RMM Housekeeping is run with EXPROC.

Interactions & Dependencies

- Software Dependencies
  - None.

- Hardware Dependencies
  - None.

- Exploiters
  - This new retention attribute parameter can be exploited in an SMS configuration, can be found on the RMM panel of ISMF.

Upgrade & Coexistence Considerations

- To exploit this solution, all systems in the Plex must be at the new z/OS level: **No**

- New feature can only be exploited on systems on the newest release, but lower-level systems can tolerate the new feature.

  - APAR OA67189

- RMM Housekeeping can be run on any system level with valid results with this new feature.

  - Lower-level systems in a plex will comprehend WC(ONLY) for EXPDT datasets and will expire/not expire as applicable.

Installation & Configuration

- Are any APARs or PTFs needed for enablement? No.

- What jobs need to be run? None.

- What hardware configuration is required? No.

- What PARMLIB statements or members are needed? No.

- Are any other system programmer procedures required? No.

- Are there any planning considerations? No.

- Are any special web deliverables needed? No.

- Does installation change any system defaults? No.

Summary

- Continue expanding modern offerings as customer requirements arise

- 3 primary ways to apply Catalog Control for retention of EXPDT Tape Datasets
  - SMS Configuration (Management Class)
  - RMM Logic (EDGDEF)
  - Default (EDGRMM)

- Increases platform cohesion of retention policies for data across storage tiers

- While lower releases can tolerate the feature, full functionality is only available on 3.2

Appendix

- z/OS 3.2: DFSMSrmm Managing and Using Removable Media

Usage – ISMF & SMS – Help Panels (1)

- Management Class List – HELP panel (DGTHMC3E)

```
DGTHMC3E ---------------- RETAIN WHILE CATALOGED (46) ------------------HELP
COMMAND ===> _

   RETAIN WHILE      The RETAIN WHILE CATALOGED shows whether the catalog status
   CATALOGED         of data sets affects its expiration.
   ----(46)----
   UNTILEXPIRED


   Possible values:
       OFF        the catalog status of the data set has no effect on when it
                  expires.
       NO         the data set will be retained past its expiration date if it
                  is cataloged.
       UNTILEXPIRED  the data set will expire after its status changes to
                     uncataloged or if the expiration date is reached.
       ONLY    the data set will not expire if its cataloged.

   The following special characters may appear in this data column:
       ---     - the value has not been specified.
       ???     - the value cannot be displayed because of an error.
```
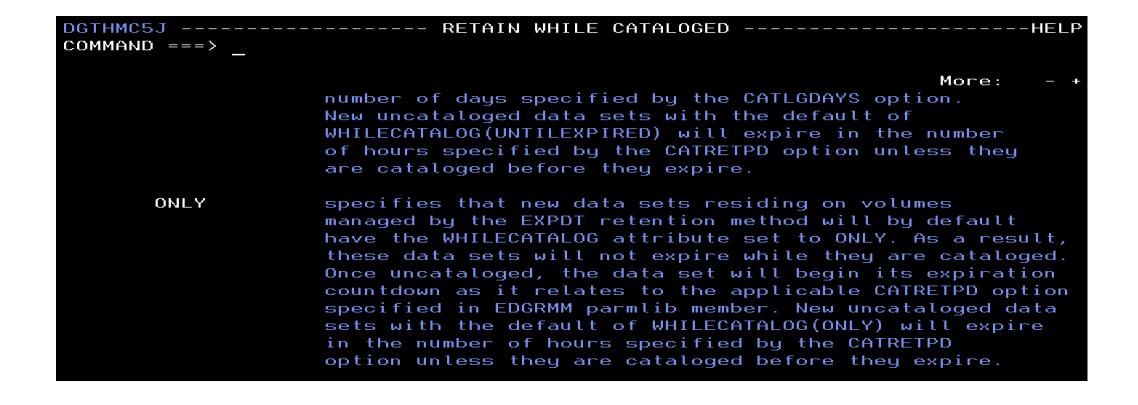
Usage – ISMF & SMS – Help Panels (2)

- Management Class Define/Alter – HELP panel (DGTHMC7H)

```
DGTHMC7H ---------------------- RETAIN WHILE CATALOGED ----------------------HELP
COMMAND ===> _

                                                              More:     - +
                    to the date the data set was uncataloged plus the
                    number of days specified by the CATLGDAYS option.
                    New uncataloged data sets with the default of
                    WHILECATALOG(UNTILEXPIRED) will expire in the number
                    of hours specified by the CATRETPD option unless they
                    are cataloged before they expire.

        ONLY        specifies that new data sets residing on volumes
                    managed by the EXPDT retention method will by default
                    have the WHILECATALOG attribute set to ONLY. As a result,
                    these data sets will not expire while they are cataloged.
                    Once uncataloged, the data set will begin its expiration
                    countdown as it relates to the applicable CATRETPD option
                    specified in EDGRMM parmlib member. New uncataloged data
                    sets with the default of WHILECATALOG(ONLY) will expire
                    in the number of hours specified by the CATRETPD
                    option unless they are cataloged before they expire.
```

Usage – ISMF & SMS – Help Panels (3)

- Management Class Display – HELP panel (DGTHMC5J)

Usage – ISMF & SMS – Help Panels (4)

- Error fields for RETAIN WHILE CATALOGED (DGTMMC73)

```
DGTMMC73 -------------------------------ISMF MESSAGE-------------------------------DG---HELP
COMMAND ===> _

   MESSAGE NUMBER:   DGTMC073

   SHORT MESSAGE:      INVALID VALUE

   LONG MESSAGE:       RETAIN WHILE CATALOGED must be OFF, ON, UNTILEXPIRED,
                       ONLY or blank.

   EXPLANATION:
      You have entered an invalid Retain While Cataloged value.


   SUGGESTED ACTION:
      Correct and re-enter Retain While Cataloged. Retain While Cataloged
      must be OFF, ON, UNTILEXPIRED, ONLY or blank.
```

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