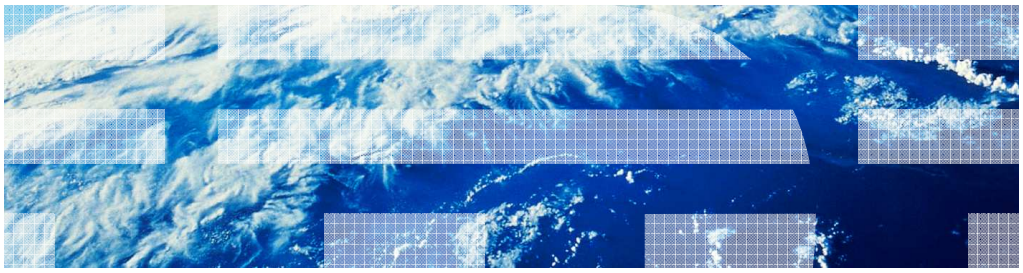
z/OS V1R13

DFSMSrmm: Simplified monitoring and management



Retention date in the volume and data set search results

Overview

- **Problem Statement / Need Addressed**
  - If a resource is retained by VRS, the search results list for volumes or data sets might show retained resources with an expiration date that is already passed.
- **Solution**
  - Display the retention date instead of the expiration date in the search results list, if the volume or data set is VRS retained.
- **Benefit / Value**
  - Storage administrators can more easily determine from the search results list why a volume is retained, without viewing the volume and data set details.

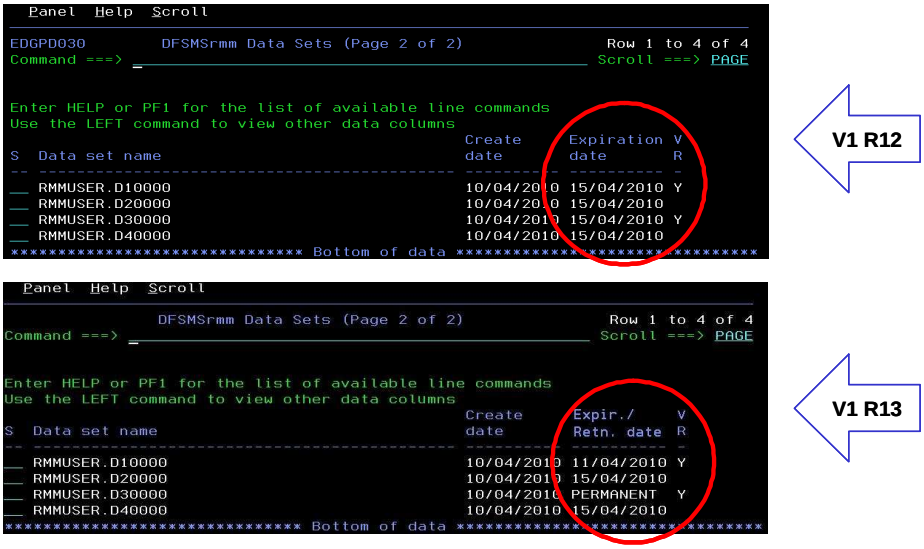
Usage and invocation

- The Search Volume and Search Dataset dialog results list will show the retention date, when a resource is VRS retained.
- The Search Dataset TSO subcommand will return the REXX variables EDG@RTDT and EDG@RTDJ in any case
- The ‘Search Dataset‘ command issued via API will return the RTDJ SFI (X’88C000‘), like it was returned by the ‘Search Dataset Extended‘ command before already

The TSO output is not changed. If you issue SearchDataset or SearchVolume commands via TSO, the displayed ‚Expiration date‘ will always be the real Expiration date, no matter, if the resource is VRS retained or not.

The date is only displayed according to the VRS status in the dialog.

Usage and invocation – Data Set Search Results Panel

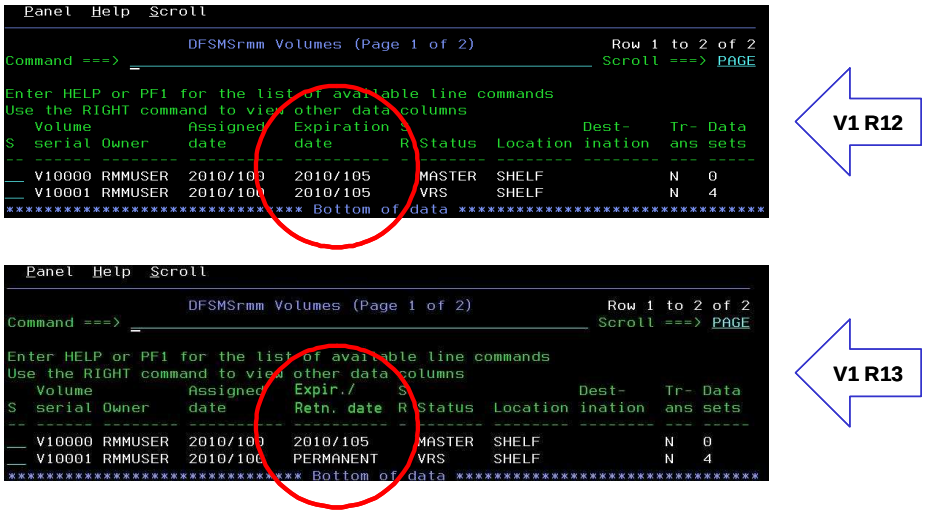


In z/OS® V1R13 VRS the volume search results ISPF panel will show the retention date for volumes retained by VRS, otherwise the expiration date will be shown.

It will be displayed either in the format as it is setup in the dialog configuration or as a special date.

Keywords for special dates may be WHILECATALOG, CATRETPD, PERMANET, CYCL/99999 or CYCL/00001.

Usage and invocation – Volume Search Results Panel



In z/OS V1R13 VRS the volume search results ISPF panel will show the retention date for volumes retained by VRS, otherwise the expiration date will be shown.

It will be displayed either in the format as it is setup in the dialog configuration or as a special date.

Keywords for special dates may be WHILECATALOG, CATRETPD, PERMANET, CYCL/99999 or CYCL/00001.

Session Summary

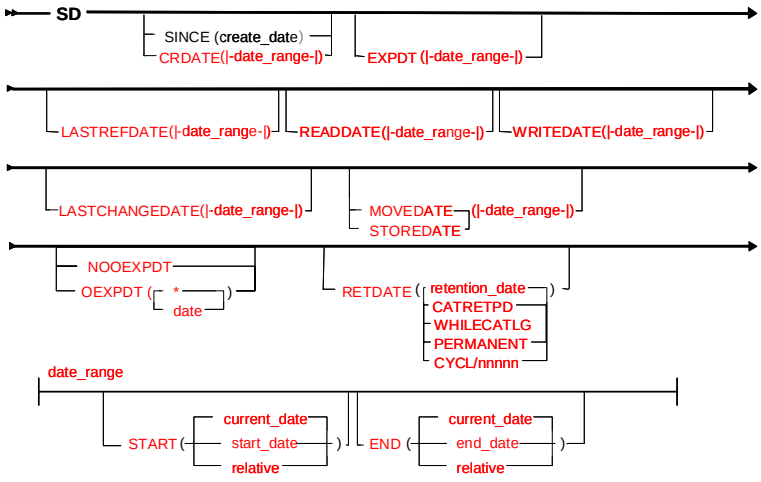
- For Volume and Data Set Searches the RMM dialog will display the retention date instead of the expiration date, if the listed resource is retained by VRS.

SEARCHDATASET Extensions

Overview

- **Problem Statement / Need Addressed**
  - The SEARCHDATASET subcommand has limited ability for searching through the attributes of data sets.
- **Solution**
  - Additional operands are added enabling more extensive searches including many on specific date ranges.
- **Benefit / Value**
  - Search more efficiently in a large number of data sets.

Usage and invocation – SEARCHDATASET Syntax



This is the new SEARCHDATASET syntax with relative date operands, based on a date range.

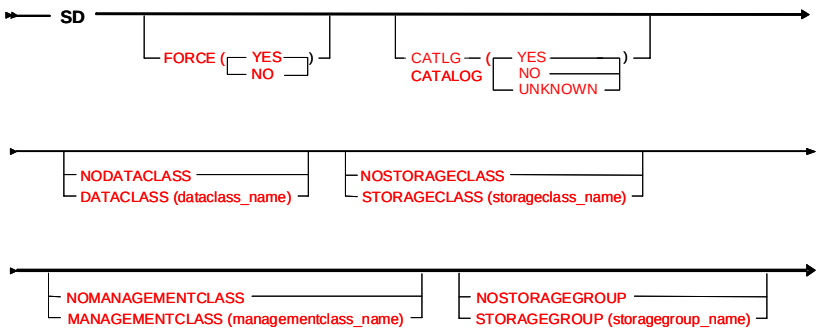
Relative dates are n days (-n), n months (-nM) or n years (-nY) back in time from the current date. Default is the current date.

Note, that the new CRDATE operand is an alternate to the existing SINCE operand.

OEXPDT (original expiration date) is mutually exclusive to NOOEXPDT. You can search for a specific date, any date or data sets having no original expiration date.

RETDATE (retention date) is added with support for special dates: CATRETPD, WHILECATLG, PERMANENT, CYCL/nnnnn.

Usage and invocation – SEARCHDATASET Syntax (cont.)



FORCE finds data sets, which are changed by CHANGEDATASET, and the requested change was only made because FORCE was specified.

CATLG or CATALOG searches data sets based on the catalog status:

- CATLG(YES) finds data sets that are currently cataloged
- CATLG(NO) finds data sets that have been uncataloged
- CATLG(UNKNOWN) finds not yet cataloged data sets

DATACLASS, STORAGECLASS, MANAGEMENTCLASS and STORAGEGROUP searches for data sets, that do have such an attribute, or when NO is prepended data sets are found that do not have this attribute.

Usage and invocation - Examples

- List all data sets that were last read or written a month ago or newer:
  - `SD LASTREFDATE(START(-1M)) OWNER(*) LIMIT(*)`
- List all data sets, whose last CDS change is 1 year ago or older and that have no original expiration date set:
  - `SD LASTCHANGEDATE(START(1900/001) END(-1Y)) + NOOEXPDT OWNER(*) LIMIT(*)`
- List all data sets that are retained forever and cataloged:
  - `SD RETDATE(PERMANENT) CATLG(YES) OWNER(*) LIMIT(*)`
- List all data sets, defined with data class “DC000001”, but no storage class:
  - `SD DATACLASS(DC000001) NOSTORAGECLASS OWNER(*) LIMIT(*)`

Usage and invocation – Dialog

```
 Panel  Help
------------------------------------------------------------------------------
EDGPD010                DFSMSrmm Data Set Search
Command ===>

Enter fully qualified or partial data set name and job name:

Data set name . . . .
Job name . . . . . .          Specific or generic name

Enter optional parameters to qualify search
                                                                More:     +
Owner . . . . . . . *         Owner of volumes (Default is your userid)
Volume serial . . . .         OR Volume serial
List entire set . . .         YES, For all data sets in the
                              multi-volume set, otherwise NO
Status . . . . . .            PRIVATE, SCRATCH, or blank for all
Retained by VRS . . .         YES, NO, or blank for all
Dates           Start       End       Date, date range or relative value
  Create . . . YYYY/DDD   . . YYYY/DDD
  Expiration              . .
  Reference . .           . .
  Read . . . .            . .
  Write . . . -99999      . . -9M
  Changed . . -           . . -

Physical file seq . .         Relative position on the volume
Limit . . . . . . . *         Limit search to first nnnn data sets
Clist . . . . . .             YES to create a data set, or NO, or blank
Program name . . . . .        Specific or generic name
Closed by Abend . . .         YES, NO, or blank for all
Deleted . . . . . .           YES, NO, or blank for all
BES key index . . . .          CA BITE tape encryption key index
Original EXPDT . . . .        YES, NO, or a specific date YYYY/DDD
Retention . . . . . .         Data set retained up to YYYY/DDD
Cataloged . . . . . .         YES, NO or UNKNOWN
Force . . . . . .             Data sets used with FORCE ( YES or NO )
Data class . . . . . .        Data class name or NO
Storage class . . . .         Storage class name or NO
Management class . . .        Management class name or NO
Storage group . . . .         Storage group name or NO
```

Session Summary

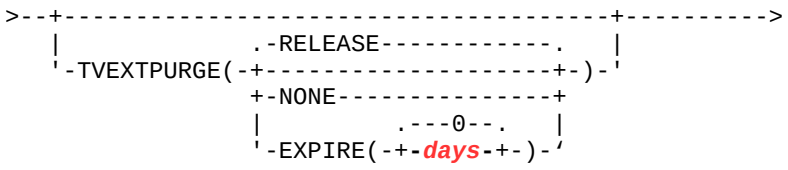
- Benefit from relative dates and date ranges for data set searches
- Support to search for special retention dates and the original expiration date
- Support to search based on the catalog status and DC, MC, SC and SG

TVEXTPURGE Extra Days

Overview

- **Problem Statement / Need Addressed**
  - If DFSMShsm tapes are expired by the EDGTVEXT HSM exit, extra days for retention can only be defined with an EXTRADAYS VRS.
- **Solution**
  - With the parmlib option TVEXTPURGE(EXPIRE(days)) a number of extra days can be defined with no additional consideration.
- **Benefit / Value**
  - No extra effort for defining and applying a new VRS.

Usage and invocation – PARMLIB OPTION TVEXTPURGE



EXPIRE(*days*) — Use the EXPIRE(*days*) option to set the volume expiration date to the current date + *days* for volumes to be purged.

Usage and invocation – LISTCONTROL Output

```
System options:
PARMLIB Suffix  = $$
Operating mode  = P    Retention period: Default = 44      Maximum = 9999
                                         Catalog = 12    hours
Control data set name      = RMMUSER.APAR.MASTER
Journal file data set name = RMMUSER.APAR.JOURNAL
Journal threshold          = 50%              Journal transaction = NO
             :
MAXHOLD value   = 250      Lines per page = 54      System ID      = SYSTEM1
BLP             = RMM      TVEXT purge    = EXPIRE  Notify         = Y
                                 days     = 3
Uncatalog       = S        VRS job name   = 2       Message case   = M
```

Session Summary

- With the parmlib option TVEXTPURGE(EXPIRE(days)) a number of extra days can be defined with no additional consideration.

Expiry Date Set By Information

Overview

- **Problem Statement / Need Addressed**
  - By looking at the expiration date of the volume or data set it is hard to understand how it was set: Does it come from OCE or from VOLCAT, during conversion or export, or did RMM set or change it due to parmlib OPTIONS.
- **Solution**
  - DFSMSrmm now records details of what event caused the EXPDT to be set or changed.
- **Benefit / Value**
  - It is now easy to determine the event that caused the expiration date to be set or changed.

Usage and invocation

The Set by field displays the event that caused the expiration date to be set or changed.

```
blank        - Not set
  CMD          - Set by TSO subcommand
  CMD_DEF      - Default RETPD applied during subcommand processing
  CMD_VOLCAT   - EXPDT obtained from VOLCAT during subcommand processing
  OCE_JFCB     - EXPDT obtained from EXPDT/RETPD keywords or from Data
                 Class applied during tape recording
  OCE_EXIT     - EDG_EXIT100 updated the JFCB EXPDT during tape recording
  OCE_DEF      - Default RETPD applied during tape recording
  OCE_MAX      - MAXRETPD was used to reduce the requested EXPDT during
                 tape recording
  OCE_VOLCAT   - EXPDT obtained from VOLCAT during tape recording
  LCS          - EXPDT obtained from VOLCAT for system managed tapes when
                 called from OAM installation exits
  LCS_DEF      - Default RETPD applied for system managed tapes when
                 called from OAM installation exits
  TVEXTPURGE   - Set as a result of TVEXTPURGE parmlib option
  CNVT         - Set during conversion by EDGCNVT
  EXPORT       - Set during export processing
```


The **Expiration date** is the date when the volume/data set will expire.

It can be **set** from the value specified, for example, by the user, or by Data Class, or by the EDG_EXIT100 installation exit, … and if no value is specified DFSMSrmm uses the default retention period.

Subsequently the EXPDT can be **changed** by command

Usage and invocation – Example: TSO LISTDATASET

```
Data set name = DSN1
Volume        = A03401                Physical file sequence number = 1
Owner         = RMMUSER                          Data set sequence = 1
Create date   = 2010/057   Create time = 08:23:05 System ID         = SYS63
Expiration date       = 2010/057   Original expir. date  =
      Set by          = OCE_DEF
Block size            = 80         Block count           = 1
Data set size(KB)     = 1
Percent of volume     = 0          Total block count     = 1
Logical Record Length = 80         Record Format         = FB
Date last written     = 2010/057   Date last read        = 2010/057
Job name              = RMMUSERJ   Last job name         = RMMUSERJ
Step name             = TAPEIO1    Last step name        = TAPEIO1
Program name          = TAPEIO     Last program name     = TAPEIO
DD name               = TAPE       Last DD name          = TAPE
Device number         = 0590       Last Device number    = 0590
Management class      =            VRS management value  =
Storage group         =            VRS retention date    =
Storage class         =            VRS retained          = NO
Data class            =            Closed by Abend       = NO
                                   Deleted               = NO
VRSEL exclude         = NO         Catalog status        = UNKNOWN
Primary VRS details:
…
```

Usage and invocation – ISPF Panel Volume Details

```
EDGPT110              DFSMSrmm Volume Details - A03401
Command ===>

Volume . . . . . : A03401     VOL1 volser :         Rack number :
Media name . . . . : 3480                           Status  . . : MASTER
                                                                  More:     +
Volume type  . . . : PHYSICAL       Stacked count  . . . . . . : 0
WorldWide ID . . . :                                Worm . . : NO
Retention date . . :                Expiration date  . . . . . : 2022/003
Set retained . . . : NO               Set by . . . . . . . . . : OPEN_JFCB
Hold . . . . . . . : NO             Original expiration date . : 2022/003
Retention method . : EXPDT
  Set by . . . . . : CMD_DEF

Description  . . . :

Data set name  . . : 'GW'
…
```

Usage and invocation – ISPF Panel Data Set Details

```
EDGPD110                 DFSMSrmm Data Set Details
Command ===>

Data set name . . : 'GW'
Volume serial . . : A03401      Physical file sequence number . . : 1
Owner . . . . . . : RMMUSER     Data set sequence number  . . . . : 1
                                                          More:     +
Job name  . . . . : RMMUSERJ
Step name . . . . : TAPEIO1                Record format . . . . : FB
Program name  . . : TAPEIO                 Block size  . . . . . : 80
DD name . . . . . : TAPE                   Logical record length : 80
Create date . . . : 2010/029    YYYY/DDD   Block count . . . . . : 2
Create time . . . : 01:46:26               Total block count . . : 2
Create time . . . : 01:46:26               Total block count . . : 2
System id . . . . : SYS63                  Data set size (KB)  . : 1
                                           Percent of volume . . : 0
Expiration date . : 2022/003    YYYY/DDD   Device number . . . . : 0590
 Set by . . . . . : OCE_JFCB
Original  . . . . : 2022/003    YYYY/DDD. . .
```

Usage and invocation – Report Extract

EDGRDEXT – Data set name record

```
...
RDTOTAL_BLKCNT   DS    0CL20       Total block count across all vol
                 DS    ZL4
                 DS    ZL16
RDESB    DS    CL10                Expdt set by
RDUCDATE DS    CL10                Last "user" change date of
*                                  data set record
...
```

EDGRVEXT – Volume record

```
...
RVHOLD          DS  C               VOLUME HOLD - Y/N
RVESB           DS  CL10            Expdt set by
RVUCDATE        DS  CL10            LAST "USER" CHANGE DATE
RVUCTIME        DS  CL6             LAST "USER" CHANGE TIME (HHMMSS)
...
```

EDGRXEXT – Extended extract record

```
...
XVHOLD           DS  C              VOLUME HOLD - Y/N
XVESB            DS  CL10           Expdt set by - of the volume
XDESB            DS  CL10           Expdt set by - of the data set
XVUCDATE         DS  CL10           VOLUME LAST "USER" CHANGE DATE
XVUCTIME         DS  CL6            VOLUME LAST "USER" CHANGE TIME
...
```

Session Summary

- DFSMSrmm now also records details of what event caused the EXPDT to be set or changed.

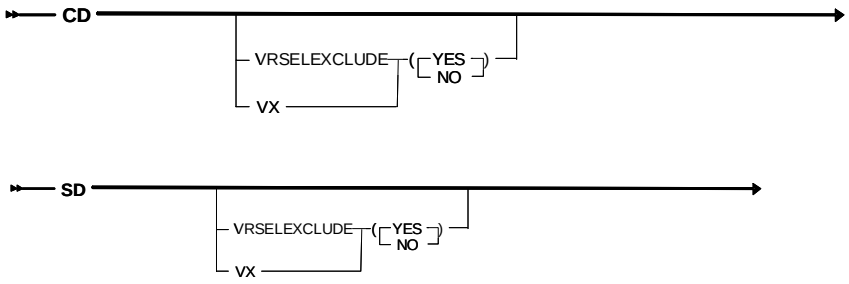
Exclude data sets from VRSEL

Overview

- **Problem Statement / Need Addressed**
  - All data in the RMM inventory is managed by dynamic VRS policies. With every housekeeping run the retention for a volume or a data set can change.
- **Solution**
  - Exclude single data sets from VRSEL.
- **Benefit / Value**
  - VRSEL Overhead Reduced by eliminating certain types of data from VRSEL processing.
  - Controlling Data set Support When a volume or volume set is VRS retained, and you exclude one or more of the data sets from VRSEL, you can have the volume managed just by those data sets not excluded from VRSEL.

Usage and invocation – TSO RMM CHANGEDATASET and SEARCHDATASET Commands

- If set to VRSELEXCLUDE=YES (and was previously NO) then:
  - the VRS retained flag is reset and
  - the retention date is set to the current date



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VRSELEXCLUDE|VX(YES|NO)

Use this operand to override DFSMSrmm VRSEL processing.

You can specify this for any data set on a volume which is managed by the VRSEL retention method.

The data set vrselexclude attribute is set for all data sets on volumes managed by the EXPDT retention method, and if already retained as a vital record, the vital record attribute is reset and the retention date set to the current date.

When a data set spans volumes you should set the VRSELEXCLUDE attribute for each data set record – one data set record for each of the volumes on which the data set resides.

Specify YES to exclude a data set from VRSEL processing.

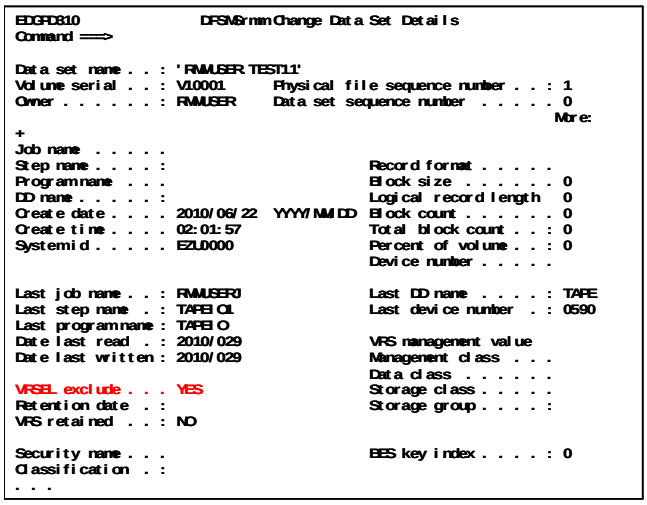
Specify NO to ensure a data set is included in VRSEL processing.

Authorization requires either CONTROL access to STGADMIN.EDG.MASTER, or UPDATE access to STGADMIN.EDG.CD.VX

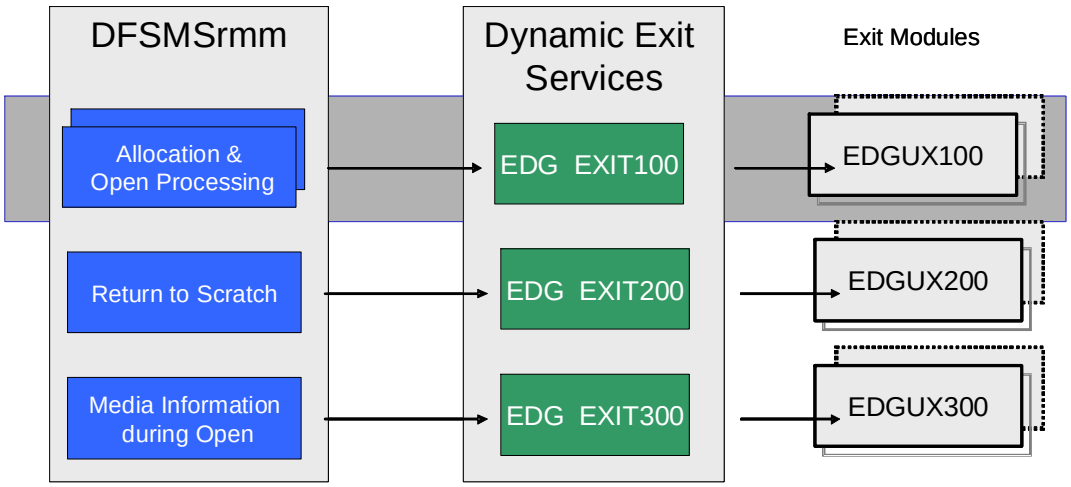
Usage and invocation – ISPF Panel Updates List Data Set

```
EDGRD110                DFSMSrmm Data Set Details
Command ===>

Data set name . . : 'GV
Volume serial . . : A03401      Physical file sequence number . . : 1
Owner . . . . . : RMMUSER       Data set sequence number  . . . . : 1
                                                            More:     +
Job name  . . . . : RMMUSERJ
Step name . . . . : TAPEIOL                 Record format . . . . : FB
Program name  . . : TAPEIO                  Block size  . . . . . : 80
DD name . . . . . : TAPE                    Logical record length : 80
Create date . . . : 2010/029    YYYY/DDD    Block count . . . . . : 2
Create time . . . : 01:46:26                Total block count . . : 2
System id . . . . : SYS63                   Data set size (KB)  . : 1
                                            Percent of volume . . : 0
Expiration date . : 2022/003    YYYY/DDD    Device number . . . . : 0590
 Set by . . . . . : COE_JFOB
Original  . . . . : 2022/003    YYYY/DDD

Last job name . . : RMMUSERJ                Last DD name  . . . . : TAPE
Last step name  . : TAPEIOL                 Last device number  . : 0590
Last program name : TAPEIO
Date last read  . : 2010/029                VRS management value  :
Date last written : 2010/029                Management class  . . :
                                            Data class  . . . . . :
VRSEL exclude . . : YES                     Storage class . . . . :
Retention date  . :                         Storage group . . . . :
VRS retained  . . : NO

Security name . . :                         BES key index . . . . : 0
Classification  . :

. . .
```

Usage and invocation – ISPF Panel Updates Change Data Set



Usage and invocation – Installation Exits Overview



Usage and invocation – Exit Support VRSELEXCLUDE

- A new option is provided via EDG_EXIT100 to request overriding DFSMSrmm VRSEL processing for specific data sets as they are created or re-written.
- The data set VRSELEXCLUDE attribute is set for all data sets on volumes managed by the EXPDT retention method, and is not affected by this support. If a data set is already retained as a vital record, the vital record attribute is reset and the retention date set to the current date.

Usage and invocation – Tailor Installation Exit EDG_EXIT100

- Copy the sample EDGUX100 exit module and use the copy as a base for your exit module.
  - Only perform your processing when the PL100_CAN_VRSELEXCLUDE bit is on.
  - Set PL100_SET_VRSELEXCLUDE bit to B'1' for data sets. If you do **not** request VRSELEXCLUDE the default for the retention method will be used.
    If the installation exit sets PL100_SET_VRSELEXCLUDE then any VRS management value set in PL100_VRS is ignored.
  - You do not need to set the PL100_SET_VRSELEXCLUDE bit when you also request to set the retention method to EXPDT: DFSMSrmm always sets the VRSELEXCLUDE attribute for data sets managed by the EXPDT retention method.
- Make any other changes required such as setting the retention method when creating the first file on the tape, or clearing the EXPDT.

Usage and invocation – EDG_EXIT100 Sample VX Table

- The sample EDGUX100 exit module includes an example of setting the VRSELEXCLUDE attribute.
  - The order in which the table entries are listed is important because the exit scans the table until it finds the first entry where the job name, data set name and program name masks match the current request. You can change the priority of matching by changing the order of the table entries.

```
VXTAB    DS    0F                  START OF VRSELEXCLUDE TABLE
         SPACE 1
         DC    CL8'*'              JOBNAME
         DC    CL44'RMMUSER.VX.*'  DATA SET NAME
         DC    CL8'*'              PROGRAM NAME
         SPACE 1
         DC    CL8'VX END'         END OF VX TABLE MARKER
```


The VXTAB table contains:

jobname

One-to-eight alphanumeric or national characters including % and *.

% can be used to ignore a positional character in the job name.

* can be used to ignore all remaining characters in the job name. A jobname of * means that the entry applies to all jobs.

data set name

Can be up to forty-four characters, following z/OS data set naming conventions, including % and *.

The character % can be used to ignore a positional character in the data set name.

The character * can be used to ignore all remaining characters in the data set name. A data set name of * means that the entry applies to all data sets.

The use of the character * is not the same as in the generic data set names supported by DFSMSrmm for vital records specifications and search data set masks. Here the * works like the characters *.*might in a generic data set name mask.

Program name

A value up to eight alphanumeric character including % and *.

% can be used to ignore a positional character in the program name.

* can be used to ignore all remaining characters in the program name. A program name of * means that the entry applies to all programs.

Tip: DFSMSrmm provides a second sample for EDGUX100. This sample is called EDGCVRSX. It is different from the EDGUX100 sample because the special date, retention method, VRSELEXCLUDE, and pooling function is table driven and you can change the table dynamically. Refer to SAMPLIB member EDGCMM01 and the IBM Red book Converting to Removable Media Manager: A Practical Guide for documentation on using EDGCVRSX for EDGUX100.

Migration and coexistance

- There are no migration concerns introduced by this support.
- z/OS releases lower than V1R13 require the PTF for coexistence APAR OA32984 to be installed before exploitation of new functions is attempted on V1R13.
- Standard coexistence recognizes and supports:
  - Data set level VRSELEXCLUDEVRSEL processing on releases below z/OS V1.13 skips these data sets

Session Summary

- VRSELEXCLUDE enablement helps to avoid batch VRS policy management by eliminating data sets from VRSEL processing.

Retention Method

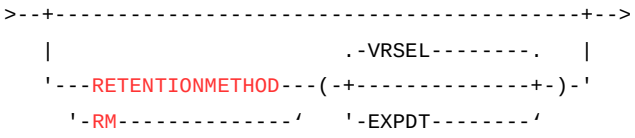
Overview

- **Problem Statement / Need Addressed**
  - Currently, all data in the RMM inventory is managed by dynamic VRS policies. With every housekeeping run the retention for a volume or a data set can change.
- **Solution**
  - Optionally assign a retention method at the time a tape data set is created enabling a choice of whether data is managed by expiration date or by VRS policies.
- **Benefit / Value**
  - This enables use of simpler retention policies and helps to avoid batch VRS policy management. As a result, the retention information for expiration date retained data can be known when a tape data set is created.

Usage and invocation – Parmlib Option

Parmlib Member EDGRMMxx

OPTION Command: RETENTIONMETHOD



- Use this operand to set the system-wide retention method for new tape volume sets created during OCE processing, and for tape volumes added to the DFSMSrmm CDS.

Usage and invocation - Description

- **VRSEL**
  - Specify VRSEL to set the default retention method for new tape volume sets to be VRSEL. This option enables DFSMSrmm inventory management to attempt to match data sets and volumes to VRSes, and if a match is found, to determine if the data set or volumes is to be retained by VRS.
  - The VRSEL retention method is controlled by all the other VRS related options in parmlib including OPTION RETAINBY MOVEBY.
- **EXPDT**
  - Specify EXPDT to set the default retention method for new tape volume sets to be based on EXPDT. Data sets and volumes managed by this retention method are never processed by VRSEL inventory management.
  - The EXPDT retention method manages at the volume level: each volume is considered separately for expiration, and each file on a volume can increment the volume expiration date.
  - All files of a multi volume data set on a volume set managed by the EXPDT retention method have the same expiration date and time.
  - When you specify the EXPDT retention method the DFSMSrmm inventory management EXPROC processing always attempts to return volumes to scratch on the same run as the volume is released (Note: this is as if the SCRATCHIMMEDIATE attribute is set for the volume).
- Default: RETENTIONMETHOD(VRSEL)

Usage and invocation – ADDVOLUME subcommand

```
>--AV---+-----------------------------------------+-->
        |                     .-VRSEL--------.    |
        '---RETENTIONMETHOD---(-+--------------+-)-'
          '-RM--------------'   '-EXPDT--------'
```

RETENTIONMETHOD|RM(VRSEL|EXPDT)

Use this operand to set the retention method for a tape volume set. Specify this operand for the first volume in a multi-volume sequence. All other volumes added to the set assume the same retention method.

Specify **VRSEL** to set the retention method for a tape volume set to be VRSEL. This option enables DFSMSrmm inventory management to attempt to match data sets and volumes to VRSes, and if a match is found, to determine if the data set or volumes are to retained by VRS.

Specify **EXPDT** to set the retention method for a tape volume set to be based on EXPDT. Data sets and volumes managed by this retention method are never processed by VRSEL inventory management.

Default: RETENTIONMETHOD(valueFromParmlibOption)

You can specify the RETENTIONMETHOD operand regardless of status and volume type, but the retention method is only implemented for non-scratch volumes.

Once a retention method is defined for a non-scratch volume it is not overridden to the system-wide default during OPEN output processing, but can be changed by installation exit EDG_EXIT100.

Volumes in a set always assume the retention method of the first volume in the set.

RETENTIONMETHOD and PREVVOL are mutually exclusive.

Usage and invocation – CHANGEVOLUME subcommand

```
>--CV---+-----------------------------------------+-->
        |                     .-VRSEL--------.    |
        '---RETENTIONMETHOD---(-+--------------+-)-'
          '-RM--------------'   '-EXPDT--------'
```

RETENTIONMETHOD|RM(VRSEL|EXPDT)

Use this operand for any volume to set the retention method for a tape volume set. Specify this operand only for the first volume in a volume set. All other volumes in the set assume the same retention method.

Specify **VRSEL** to set the retention method for a tape volume set to be VRSEL. This option enables DFSMSrmm inventory management to attempt to match data sets and volumes to VRSes, and if a match is found, to determine if the data set or volumes are to retained by VRS.

Specify **EXPDT** to set the retention method for a tape volume set to be based on EXPDT. Data sets and volumes managed by this retention method are never processed by VRSEL inventory management.

RETENTIONMETHOD is mutually exclusive with PREVVOL and NOPREVVOL operands.

(Note: to remove a volume from a volume set and also change the retention method requires two subcommands. For example: RMM CV volser NOPREVVOL, and RMM volser RM(EXPDT)

Authorization requires either CONTROL access to STGADMIN.EDG.MASTER, or UPDATE access to STGADMIN.EDG.CV.RM

Usage and invocation – SEARCHVOLUME subcommand

```
>--SV---+-----------------------------------------+-->
        |                     .-VRSEL--------.    |
        '---RETENTIONMETHOD---(-+--------------+-)-'
          '-RM--------------'   '-EXPDT--------'
```

RETENTIONMETHOD|RM (VRSEL|EXPDT)

Use this operand to restrict the returned volumes based on the retention method.

- Specify VRSEL to select volumes with the VRSEL retention method.
- Specify EXPDT to select volumes with the EXPDT retention method.

Usage and invocation – LISTCONTROL OPTION Output

```
System options:
 PARMLIB Suffix  = PA
 Operating mode  = P    Retention period: Default = 0       Maximum = NOLIMIT
                                          Catalog = 12    hours
                       Retention method: Method  = VRSEL
 Control data set name      = RMMUSER.APAR.MASTER
 Journal file data set name = RMMUSER.APAR.JOURNAL
 Journal threshold          = 50%               Journal transaction = NO
 Catalog SYSID              = Notset
 Scratch procedure name     = EDGXPROC
 Backup procedure name      =
 IPL date check  = N        Date format    = J       RACF support   = N
 SMF audit       = 248      SMF security   = 249     CDS id         = CDS1
 MAXHOLD value   = 100      Lines per page = 54      System ID      = SYS63
 BLP             = NORMM    TVEXT purge    = EXPIRE  Notify         = N
                                 days      = 3
 ...
```

Usage and invocation – EDG_EXIT100 Retention Method Support

- You can use the EDG_EXIT100 installation exit to set the retention method to be used for new tape data. When you create a new tape volume set, or rewrite an existing set from the first file you can override the system default retention method.

```
ENT1ST   DS    0F
* start of RDS entries
         EDGCVRSG DSN=RMMUSER.RMEXPDT.*,                          X
               RM=EXPDT,                                          X
               RO=NO,                                             X
               RETPD=5
        EDGCVRSG DSN=*,                                           X
               RM=NONE,                                           X
               RO=NO,                                             X
               RETPD=5
* start of keyword dates from EDGC5LDR
         EDGCVRSG KEYDATE=98010,                                  X
               VRSVAL=D98010
         EDGCVRSG KEYDATE=99000,                                  X
               VRSVAL=D99000
         EDGCVRSG KEYDATE=99010,                                  X
               VRSVAL=D99010
         EDGCVRSG KEYDATE=99110,                                  X
               VRSVAL=D99110
         EDGCVRSG KEYDATE=99201,                                  X
               VRSVAL=D99201
ENTLAST  EDGCVRSG DSN='*',RO='NO'
```

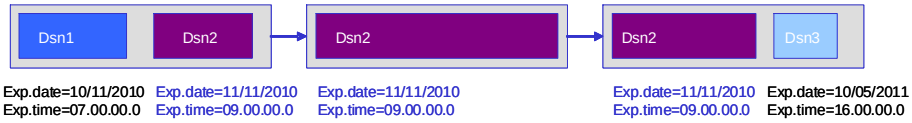
Usage and invocation – Expiry date equalization (1 of 2)

- RMM maintains a consistent data set expiration date and time for data set on volumes managed by the EXPDT retention method under at these times:
  - During O/C/EOV processing. The expiration time is rounded up to whole hour to help avoid I/O to the RMM CDS. This is done for the first data set record for a data set, and only repeated if data set creation continues onto a new volume and the then current time exceeds the rounded up value.
  - When you specify EXPDT/RETPD on ADDDATASET or CHANGEDATASET subcommands.
  - During CHANGEVOLUME PREVVOL
  - When the retention method of the volume set is changed from VRSEL to EXPDT
  - During conversion, regardless of retention method, the expiration date of the first data set record of a multi volume data set is propagated to all other data set records of the data set.

Usage and invocation – Expiry date equalization (2 of 2)

- **VRSEL retention method**
  - Data sets on volumes managed by the VRSEL retention method are unchanged.

- **EXPDT retention method**
  - All files of a multi volume data set on a volume set managed by RM(EXPDT) have the same expiration date and time.



Exp.date=10/11/2010 Exp.time=07.00.00.0 | Exp.date=11/11/2010 Exp.time=09.00.00.0 | Exp.date=11/11/2010 Exp.time=09.00.00.0 | Exp.date=11/11/2010 Exp.time=09.00.00.0 | Exp.date=10/05/2011 Exp.time=16.00.00.0

Usage and invocation – New TSO Subcommand Return/Reason Code

Return Code	Reason Code	Message Number	Issuing Command	Description
12	266	3363	CV, AV	Retention method can only be specified for the first volume in a set

Usage and invocation – Authorization

Define the resource	To Control the
STGADMIN.EDG.CV.RM^minlength	Updating of retention method. Supporting CV RETENTIONMETHOD|RM

When you Define	With Access	Then
STGADMIN.EDG.CV.RM minlength	Entity not defined	Based on STGADMIN.EDG.MASTER access.
	UPDATE	Allows any volume to be updated

Usage and invocation – New EDGJRPT/EDGRRPTE Report 18

```
DFSMSrmm                  Inventory of Data Set Names by Volume Retention Method EXPDT      PAGE -           1  EDGRPT18
     DATE -    2010/129
                                                                                                            TIME -    08:11:53

                                          Volume Vol- DSN-  Creating Create     Create Volume     DSN         V EXPDT
  Data Set Name                            Serial Seq. Seq.  Jobname  Date       Time   Exp. Date  Exp. Date   X Set by
  ---------------------------------------- ------ ---- ----- -------- ---------- ------ ---------- ----------- - ----------
  RMMUSER.D16002                           A16002    1     1          2010/123   081146 2010/133   2010/128    Y CMD_DEF
  RMMUSER.D16003                           A16003    2     1          2010/129   081147 2010/135   2010/135    Y CMD
  RMMUSER.D16004.DS1                       A16004    3     1 BERNDS   2010/129   081147 2010/134   2010/099    Y CMD
  RMMUSER.D16004.DS2                       A16004    3     2 BERNDS   2010/129   081147 2010/134   2010/111    Y CMD
                                             End of Report.   4 Entries listed


DFSMSrmm INTERNAL USE ONLY                Inventory of Data Set Names by Volume Retention Method VRSEL      PAGE -           2
  EDGRPT18                                                                                                    DATE -    2010/129
                                                                                                            TIME -    08:11:53
-                                         Volume Vol- DSN-  Creating Create     Create Volume     DSN         V V
  Data Set Name                            Serial Seq. Seq.  Jobname  Date       Time   Ret. Date  Ret. Date   X R
  ---------------------------------------- ------ ---- ----- -------- ---------- ------ ---------- ----------- - -
  BERNDS.DATASET                           A16007    1     1          2010/123   081146 2010/240   2010/240    N Y
  BERNDS.DATASET                           A16006    1     1          2010/129   081147 2010/250               Y Y
  BERNDS.DATASET                           A16006    1     2          2010/129   081150 2010/250   2010/240    N Y
  RMMUSER.D16001.A                         A16001    1     1 TEST     2010/123   081146 PERMANENT  PERMANENT   N Y
  RMMUSER.D16001.B                         A16001    1     2 TEST     2010/123   081146 PERMANENT              Y Y
  RMMUSER.D16001.C                         A16001    1     3 TEST     2010/123   081146 PERMANENT  PERMANENT   N Y
  RMMUSER.D16005                           A16005    1     1          2010/129   081147                        N N

                                             End of Report.   7 Entries listed
```

Usage and invocation – New EDGJRPT/EDGRRPTE Report 18

```
DFSMSrmm                 Inventory of Data Set Names by Volume Retention Method EXPDT      PAGE -          1  EDGRPT18
     DATE -    2010/129                                                                                TIME -    08:11:53

                                          Volume Vol- DSN-  Creating Create     Create Volume     DSN         V EXPDT
 Data Set Name                             Serial Seq. Seq.  Jobname  Date       Time   Exp. Date  Exp. Date   X Set by
 ---------------------------------------- ------ ---- ----- -------- ---------- ------ ---------- ---------- - ----------
 RMMUSER.D16002                           A16002    1     1          2010/123   081146 2010/133   2010/128    Y CMD_DEF
 RMMUSER.D16003                           A16003    2     1          2010/129   081147 2010/135   2010/135    Y CMD
 RMMUSER.D16004.DS1                       A16004    3     1 BERNDS   2010/129   081147 2010/134   2010/099    Y CMD
 RMMUSER.D16004.DS2                       A16004    3     2 BERNDS   2010/129   081147 2010/134   2010/111    Y CMD
                                            End of Report.   4 Entries listed


DFSMSrmm INTERNAL USE ONLY               Inventory of Data Set Names by Volume Retention Method VRSEL      PAGE -          2
  EDGRPT18                                                                                                 DATE -    2010/129
                                                                                                           TIME -    08:11:53
-                                         Volume Vol- DSN-  Creating Create     Create Volume     DSN         V V
  Data Set Name                            Serial Seq. Seq.  Jobname  Date       Time   Ret. Date  Ret. Date   X R
  ---------------------------------------- ------ ---- ----- -------- ---------- ------ ---------- ---------- - -
  BERNDS.DATASET                           A16007    1     1          2010/123   081146 2010/240   2010/240    N Y
  BERNDS.DATASET                           A16006    1     1          2010/129   081147 2010/250               Y Y
  BERNDS.DATASET                           A16006    1     2          2010/129   081150 2010/250   2010/240    N Y
  RMMUSER.D16001.A                         A16001    1     1 TEST     2010/123   081146 PERMANENT  PERMANENT   N Y
  RMMUSER.D16001.B                         A16001    1     2 TEST     2010/123   081146 PERMANENT              Y Y
  RMMUSER.D16001.C                         A16001    1     3 TEST     2010/123   081146 PERMANENT  PERMANENT   N Y
  RMMUSER.D16005                           A16005    1     1          2010/129   081147                        N N

                                             End of Report.   7 Entries listed
```

Usage and invocation – New EDGJRPT/EDGRRPTE Report 18

```
DFSMSrmm                  Inventory of Data Set Names by Volume Retention Method EXPDT      PAGE -          1  EDGRPT18
     DATE -    2010/129                                                                                    TIME -    08:11:53

                                          Volume Vol- DSN-  Creating Create     Create Volume     DSN         V EXPDT
 Data Set Name                             Serial Seq. Seq.  Jobname  Date       Time   Exp. Date  Exp. Date   X Set by
 ----------------------------------------- ------ ---- ----- -------- ---------- ------ ---------- ---------- - ----------
 RMMUSER.D16002                            A16002    1     1          2010/123   081146 2010/133   2010/128   Y CMD_DEF
 RMMUSER.D16003                            A16003    2     1          2010/129   081147 2010/135   2010/135   Y CMD
 RMMUSER.D16004.DS1                        A16004    3     1 BERNDS   2010/129   081147 2010/134   2010/099   Y CMD
 RMMUSER.D16004.DS2                        A16004    3     2 BERNDS   2010/129   081147 2010/134   2010/111   Y CMD
                                             End of Report.   4 Entries listed


DFSMSrmm INTERNAL USE ONLY                Inventory of Data Set Names by Volume Retention Method VRSEL      PAGE -          2
  EDGRPT18                                                                                                   DATE -    2010/129
                                                                                                             TIME -    08:11:53
-                                         Volume Vol- DSN-  Creating Create     Create Volume     DSN         V V
  Data Set Name                            Serial Seq. Seq.  Jobname  Date       Time   Ret. Date  Ret. Date   X R
  ----------------------------------------- ------ ---- ----- -------- ---------- ------ ---------- ---------- - -
  BERNDS.DATASET                           A16007    1     1          2010/123   081146 2010/240   2010/240   N Y
  BERNDS.DATASET                           A16006    1     1          2010/129   081147 2010/250              Y Y
  BERNDS.DATASET                           A16006    1     2          2010/129   081150 2010/250   2010/240   N Y
  RMMUSER.D16001.A                         A16001    1     1 TEST     2010/123   081146 PERMANENT  PERMANENT  N Y
  RMMUSER.D16001.B                         A16001    1     2 TEST     2010/123   081146 PERMANENT              Y Y
  RMMUSER.D16001.C                         A16001    1     3 TEST     2010/123   081146 PERMANENT  PERMANENT  N Y
  RMMUSER.D16005                           A16005    1     1          2010/129   081147                        N N

                                             End of Report.   7 Entries listed
```

Usage and invocation - EDGJACTP

- VRSRETN Report
  - A new data column is added to include the data set VRSEXCLUDE attribute.
  - Note that the VRSRETN and VRSRETNS reports are produced only for volumes that are managed by the VRSEL retention method.
- EXPDROP Report
  - A new data column is added to include the retention method

Usage and invocation - EDGJACTP VRSRTN Report

Newly assigned volumes subject to VRSRETAIN 01/20/09 05:55:21 - 1 -

Status: RETAINED

DATA SET					DATA SET VRS					VOLUME			
VOLSER	FSEQ	DSNAME	JOBNAME	V X	RETAINED	DROP PRIM	REASON 2nd.	PRIMARY VRS	JOB MASK	VRS TYPE	VRS	RETAIN REASON	F C
A22251	1	RMMUSER.DSN1		N	Y			RMMUSER.*		D		DATASET	
A22252	1	RMMUSER.DSN20		N	Y			RMMUSER.*		D		DATASET	
A22252	2	RMMUSER.DSN21		N	Y			RMMUSER.*		D		DATASET	
A22253	1	D046059.DSN01		Y	N	W		D046059.*		D		IMPLICIT	
A22253	2	DSN02		Y								IMPLICIT	
A22253	3	D046059.DSN03		N	Y			D046059.*		D		DATASET	
VOL001	1	First.data.set	F1J	N	N	D		ABEND	*	D	VOL001	VOLUME	
VOL001	2	Second.data.set	F1J	Y							VOL001	VOLUME	
VOL002	1	Second.data.set	F1J	Y								SET	
VOL002	2	third.data.set	F1J	Y								SET	

data sets in this status: 10

Newly assigned volumes subject to VRSRETAIN 01/20/09 05:55:21 - 2 -

Status: NOTRETAINED

DATA SET					DATA SET VRS					VOLUME			
VOLSER	FSEQ	DSNAME	JOBNAME	V X	RETAINED	DROP PRIM	REASON 2nd.	PRIMARY VRS	JOB MASK	VRS TYPE	VRS	RETAIN REASON	F C
A22250	1	D046059.WCATALOG	SSTEINHA	N	N	W		D046059.*		D			
A22256	1	DSN6		N									
NO0001	1	ANOTHER.DSET	WOODY1	Y									
NO0001	2	YET.ANOTHER	WOODY2	Y									

data sets in this status: 4

Usage and invocation - EDGJACTP EXPDROP Report

EXPDT retained volumes subject to EXPDTDROP 01/20/09 05:55:21 - 1 -

Status: RELEASED

VOLSER	VSEQ	DSNAME	JOBNAME	EXPRSN	ASSIGNED	EXPDT	RM	SR	RETDATE	ACTIONS	LOCATION	HOME	DEST	RLS ACT	HOLD
A22255	1	NOMATCH.DSN5	SSTEINHA	X	12/12/1999	01/01/2009	V	N	19/02/2008	S EN	ROBBIE	ROBBIE		S EN	N
A22256	1			X	12/12/1999	12/31/2008	E	N		O	VAULT	SHELF	SHELF	O	N

Volumes in this status: 2

EXPDT retained volumes subject to EXPDTDROP 01/20/09 05:55:21 - 2 -

Status: NOCHANGE

VOLSER	VSEQ	DSNAME	JOBNAME	EXPRSN	ASSIGNED	EXPDT	RM	SR	RETDATE	ACTIONS	LOCATION	HOME	DEST	RLS ACT	HOLD
A22257	1	DSN7	SSTEINHA		02/06/1993	PERM	V	N	12/12/2008		VAULT	ROBBIE		S	N
A22258	1	DSN7	SSTEINHA		02/06/1993	01/05/1990	V	Y	12/12/2008		VAULT	ROBBIE		S	Y

Volumes in this status: 2

Usage and invocation – Retention method considerations

- You do not need to run VRSEL processing unless any volumes are defined with the VRSEL retention method. Only EXPROC processing is required to handle expiration of all volumes managed by the EXPDT retention method.
- EXPROC processing provides a summary of volumes by retention method. See the MESSAGE file example below.
- The expiration date of volumes is set during OPEN processing, so for volumes managed by the EXPDT retention method no special considerations exist for open data sets – they are managed based on the volume EXPDT.
- Volumes containing data sets closed by ABEND processing or which are DELETEd are handled as if no special ABEND/DELETED VRS had been defined. i.e. All retention is based only on the volume EXPDT.
- Volumes managed by the EXPDT retention method are included only in the EXPDTDROP limit. VRSRETAIN and VRSDROP limits apply only to volumes managed by VRSEL retention method.

Migration and coexistence

- There are no migration concerns introduced by this support.
- Sharing z/OS releases lower than V1R13 requires the PTF for coexistence APAR OA32984 to be installed before exploitation of new functions is attempted on V1R13.
- Standard coexistence recognizes and supports:
  - Volume level RETENTIONMETHOD
    DFSMSrmm EXPROC processing only processes volumes with the VRSEL retention method
  - All files of a multi volume data set on a volume set managed by RM(EXPDT) have the same expiration date and time.
    DFSMSrmm coexistence maintains the data set records in synch both while tape data sets are processed and when an RMM ADD or CHANGE subcommand is issued.

Session summary

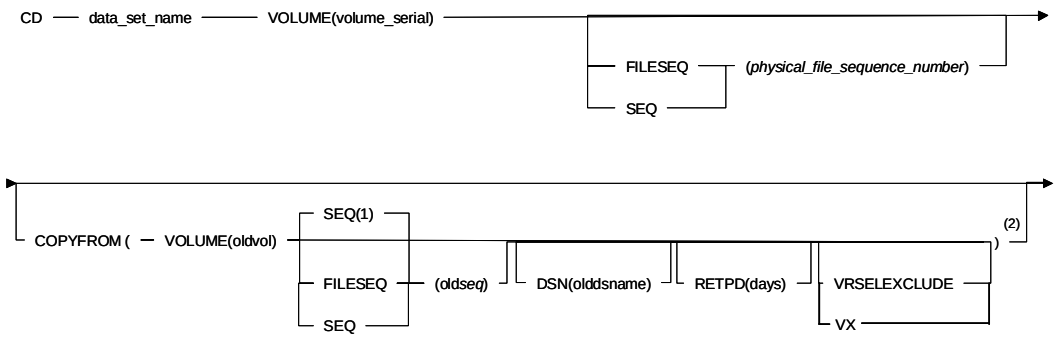
- Volume Retention Method enables use of simpler retention policies and helps to avoid batch VRS policy management. As a result, the retention information for expiration date retained data can be known when a tape data set is created.

Data set attribute copy function

Overview

- **Problem Statement / Need Addressed**
  - Tape copy applications use RMM subcommands to update data set and volume meta data after a copy is completed. BUT not all data set and volume attributes can be copied via RMM subcommands. Retention of the source and target data sets is subject to VRS processing and results are not always predictable.
- **Solution**
  - A new data set subcommand option, that supports the copying all applicable attributes and controlling the retention of the source data set.
  - Installation exit EDG_EXIT100 Option to provide Source Data Set KeyUsing the installation exit you can avoid issuing the subcommands needed for copying data set attributes.
    - Avoids need for CD commands after the copy completes
    - When all files are copied, use RMM CV volser RETENTIONMETHOD(EXPDT) RETPD(retpd)
- **Benefit / Value**
  - Copy applications which exploit EDG_EXIT100 to identify data set attributes at OPEN time should benefit from the new processing.
  - Whether by using subcommands or the user exit copied data sets inherit all required attributes without the copy application knowing what all the attributes are.

Usage and invocation – TSO RMM CHANGEDATASET



2.) This operand can only be specified by a user with CONTROL access to the STGADMIN.EDG.MASTER security resource. Owner authorization does not apply.

RMM CD data_set_name VOLUME(volser) SEQ(1|seq) COPYFROM(2)(VOLUME(oldvol) FILESEQ|SEQ(1|oldseq) [DSN(olddsname)] [RETPD(daysUntilFromDatasetIsNolongerRetained)] [VRSELEXCLUDE])

data_set_name VOLUME SEQ|FILESEQ

Is like SD CHAIN. It identifies a single volume data set or any part of a multi-volume data set.

Validation is done to ensure that the source and target data sets are the same, refer to 2.1.2.2.1 Validation for details.

You use the CHANGEDATASET subcommand once for each target data set record. For multi-volume data sets this means that you must issue the subcommand for each part of the multi-volume data set. i.e. Once for each volume the target data set is written on. For example:

Data set MIKE.EXAMPLE is the only file on volume MW0001 is copied from physical tape into a virtual tape system. It is a single input volume but now multiple output volumes: VT0001, VT0002, and VT0003. When the data has been copied, you would issue the following commands to copy the input data set record attributes to each of the output data set records:

RMM CD 'MIKE.EXAMPLE') VOLUME(VT0001) COPYFROM(VOLUME(MW0001))

RMM CD 'MIKE.EXAMPLE') VOLUME(VT0002) COPYFROM(VOLUME(MW0001))

RMM CD 'MIKE.EXAMPLE') VOLUME(VT0003) COPYFROM(VOLUME(MW0001))

DSN(olddsname)

This sub-operand identifies the source data set record from which attributes are to be copied. You can optionally use a different data set name as the target. The default is that the *olddsname* matches *data_set_name*

VOLUME(oldvol)

This sub-operand identifies the source data set record from which attributes are to be copied. There is no default value.

SEQ|FILESEQ(oldseq)

This sub-operand identifies the source data set record from which attributes are to be copied. It specifies the physical file sequence number. Use this operand to identify the relative position of the source data

set on the *oldvol*. The minimum allowable decimal value is 1. The maximum allowable decimal value is 65535. The default value is 1.

[RETPD(daysUntilFromDatasetIsNolongerRetained)]

This suboperand causes rmm to update the original data set record expiration date.

There is no default value. By default the original data set is not updated. The value can be 0 to 93000.

[VRSELEXCLUDE]

Usage and invocation – CHANGEDATASET COPYFROM

- When you specify any other CHANGEDATASET subcommand operands the processing sequence in DFSMSrmm is that the COPYFROM operand is processed first, then the additional operands.
- This means that additional operands can specify data that overrides the attributes copied.

Usage and invocation – Authorization

Define the resource	To Control the
STGADMIN.EDG.CD.COPYFROM.*dsname* minlength	Copying of data set attributes from data set *dsname* to another data set, and to affect the retention of the source data set.

minlength

If you use a generic profile, the minimum non-generic profile name checked for by DFSMSrmm is 'STGADMIN.EDG.CD.'

Note: The *dsname* included in the authorization check is a maximum of the first 14 characters of the dsname. The resource name is limited by the maximum length of 39 characters for FACILITY class profiles.

When you Define	With Access	Then
STGADMIN.EDG.CD.COPYFROM.dsname	Entity not defined	Based on STGADMIN.EDG.MASTER access.
	READ	You are permitted to copy attributes and update retention for identically named data sets.
	UPDATE	You are permitted to copy attributes and update retention for any two data set records.

Usage and invocation – Copying data set attributes

- After copying the data set attributes, all data set records of the target data set make the data set appear to be the original.
- DFSMSrmm copies all attributes which are not related to the physical aspects of the data set, volume and tape drive. All other attributes are copied.
- Those attributes related to retention are subject to update by the next run of inventory management. The intention is that the copied data set will be retained in the same way as the source data set.
- When you use the COPYFROM subcommand operand the last change information of the target data set is also updated during command processing to reflect that the command was processed.
- After the attributes are copied there will be no trace of the copy application or the batch job used to perform the copy because all target data set attributes reflect the creation and use of the source data set.

Usage and invocation – Data set attributes not copied

Command operand No cmd operand	Extract file field	REXX Variable/SFI
dsname	RDDSNAME	EDG@DSN
VOLUME	RDVOLSER	EDG@VOL
SEQ|FILESEQ	RDDSNSEQ	EDG@FILE
LABELNUMBER	RDLABNO	EDG@DSEQ
TOTALBLKCOUNT	RDTOTAL_BLKCNT	EDG@BLKT
PERCENT	RDPERCENT	EDG@DPCT
DEVNUM	RDUNITAD	EDG@DEV
LRECL	RDLRECL	EDG@LRCL
RECFM	RDRECFM	EDG@RCFM
BLKSIZE	RDBLKSZ	EDG@BLKS
BLKCOUNT	RDBLKCNT	EDG@BLKC
owner	RDOWNDSN	EDG@OWN
data set size	RDDSSIZE, RDSIZE	EDG@DSS6
catalog status	RDCAT	EDG@CTLG
STORAGECLASS	RDSCNAME	EDG@SC
storage group	RDSGNAME	EDG@SG
DATACLASS	RDDCNAME	EDG@DC
start block ID	n/a	n/a
end block ID	n/a	n/a
last device number	RDLDEVN	EDG@LDEV
BESKEY	RDBESKEY	EDG@BESK
VRSELEXCLUDE	RDVEX	EDG@VEX Note: This attribute is not copied unless both the source and target volumes are managed by RM(VRSEL)
ABEND	RDABEND	EDG@ABND Note: This attribute is not copied unless it is set. The source setting is merged with the target setting.

Usage and invocation – Installation exit support

- A new option is provided via EDG_EXIT100 to notify RMM that the data set being created **is being copied from another**.
  During OPEN processing the exit can identify the source data set from which rmm will obtain all existing data set attributes which will be used for the new data set. DFSMSrmm EOV processing ensures that the attributes are copied to all new data set records when the output data set becomes a multi-volume data set.

```
PL100_CAN_COPYFROM    EQU X'08'
PL100_SET_COPYFROM    EQU X'04'
PL100_COPYFROM_DSN    DS CL44
PL100_COPYFROM_VOLSER DS CL6
PL100_COPYFROM_DSEQ   XL4
PL100_COPYFROM_OWNER  DS CL8   …
```

Usage and invocation – Installation Exit Exploitation

- **Dynamic Exit Available since z/OS V1R11**
  - Add exit module dynamically prior to the first copy
    - Pass source data set key via exit - Dsname, file sequence, volser
    - Select required retention method and VRSELEXCLUDE for target via exit
    - During OPEN &CLOSE the attributes are copied from source to target Data Set record
    - Physical attributes are set based on volume and drive used
  - Delete exit module at end of processing / all copies completed
  - Your copy application must communicate with your exit module
  - When processing successful use the RMM API to:
    - Issue RMM commands for source data sets and volumes, for example:
      - RMM DV volser RELEASE
        or
      - RMM CV volser RETENTIONMETHOD(EXPDT) RETPD(4)
        or

        RMM CD sourcedsn VOLUME(sv) SEQ(ss) VRSELEXCLUDE(YES)

Usage and invocation – Installation exit note

Note: It is your responsibility to provide the correct source data set details. If you pass the wrong source COPYFROM data set details, one of the follow applies:

1. If you do not provide valid values for PL100_COPYFROM_DSN, PL100_COPYFROM_VOLSER, and PL100_COPYFROM_DSEQ your request is ignored.
2. If the data set record is not already defined in the DFSMSrmm CDS processing continues but WTO EDG4063I is issued to the job log and the system log.
3. If the data set record is found all relevant attributes are copied.

Session summary

- Copy applications which exploit EDG_EXIT100 to identify data set attributes at OPEN time should benefit from the new processing (performance, attributes which can be copied, selection of retention and retention policy) as an additional API request to drive the Data Attributes Copying after the tape data copying itself can be avoided.
- The ChangeDataset subcommand with COPYFROM parameter ensures that all attributes for a copied data set are set correctly with only one single subcommand.

Support RETPD(93000)

Overview

- **Problem Statement / Need Addressed**
  - Longer periods being implemented in DFSMS constructs.
- **Solution**
  - Support RETPD(93000) and MAXRETPD(93000) in all places in RMM.
- **Benefit / Value**
  - Support system wide retention period limit.

Usage and invocation – PARMLIB Updates

```
|-+--------------------+------->
  |        .---5---.   |
  '-RETPD(-+-------+-)-'
           '-nnnnn-'

|-+------------------------+-->
  |           .-NOLIMIT-.   |
  '-MAXRETPD(-+---------+-)-'
              '--nnnnn--'
```

The new maximum value is 93000.

Usage and invocation – TSO RMM subcommands

- ADDDATASET
- ADDVOLUME
- CHANGEDATASET
- CHANGEVOLUME
- GETVOLUME
- The new maximum retention period is 93000.

Session summary

- With z/OS V1R13, DFSMSrmm does support RETPD(93000) and MAXRETPD(93000) in all places.

Appendix - References

Books and references

▪ DFSMSrmm Managing and Using Removable Media	SC26-7404-12
▪ DFSMSrmm Application Programming Interface	SC26-7403-11
▪ DFSMSrmm Implementation & Customization Guide	SC26-7405-12
▪ DFSMSrmm Diagnosis Guide	GY27-7619-11
▪ DFSMSrmm Reporting	SC26-7406-11

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