RMM and HSM Report Generator

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DFSMSdss	TotalStorage
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DFSMSrmm	zEnterprise
DFSORT	

Agenda

- Introducing the RMM Report Generator
- Setting up Installation Wide Options
- Customizing for Personal Use
- Working with Predefined Sample Reports
- Creating New Reports
- Selecting a Reporting Tool
- Using Titles, Headers and Footers
- Understanding Selection Criteria, Sorting and Grouping
- Generating and Saving the Report JCL
- Tips & Tricks
- Summary

Introducing the RMM Report Generator

- The RMM Report Generator is an ISPF application which simplifies the process of creating and <u>managing</u> RMM reports.

- It comes with several predefined reports which can be used out of the box or tailored to your specifications

- You can also use it to generate new 'AdHoc' reports

- Assembler macros are used to map the data you wish to report on

  - Mapping macros are supplied for

    - RMM: extract dataset, SMF records, and ACTIVITY Records

    - HSM: FSR, WFSR, and DCOLLECT

    - SMS: DCOLLECT

  - You can also provide your own Macros to map non-RMM, non-DFSMS data

- The tool is used to select fields from the 'mapped' data, include or exclude a subset of input records, and specify how you want the data sorted and grouped

- JCL is then generated to produce the report using an existing reporting tool such as DFSORT's ICETOOL.

- Context sensitive help screens are available throughout the application

Terminology

– **Reporting Tool**: A reporting utility such as DFSORT's ICETOOL

– **Report Definition**: Defines the report layout including column order and sort preferences

– **Report Type**: Defines the type of record being used and how it is mapped

– **Selection Criteria**: Defines which records will be selected for reporting

– **Product Library**: DFSMS supplied sample reports, default is SYS1.SAMPLIB

– **Installation Library**: Customized installation-wide report definition library

– **User Libraries**: End User report definition and JCL libraries

Starting the Report Generator application

- Using option 'G' from ISMF
- Using option 'R' from the RMM User or Librarian menus will take you directly to the Report Definition Search panel
- Option 'R' from the RMM Commands menu takes you to the main Report Generator panel
- The 'REPORT' fast path command also takes you to the main Report Generator panel and can be used from any other RMM panel

- Use the Report Options panel to define the Installation Library

- Default space is 10 tracks primary and secondary and 50 directory blocks

- Set up appropriate security access for installation library and RMM extract data set

- Create customized Report Types and Report Definitions and store in installation library

Setting up Installation Wide Options

```
  .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .

   Panel  Help
  ─────────────────────────────────────────────────────────────────────

                 REMOVABLE MEDIA MANAGER (DFSMSrmm) - z/OS V2R1
  Option ===> REPORT_


  0   OPTIONS         - Specify dialog options and defaults
  1   USER            - General user facilities
  2   LIBRARIAN       - Librarian functions
  3   ADMINISTRATOR   - Administrator functions
  4   SUPPORT         - System support facilities
  5   COMMANDS        - Full DFSMSrmm structured dialog
  6   LOCAL           - Installation defined dialog
  X   EXIT            - Exit DFSMSrmm Dialog


  Enter selected option or END command. For more info., enter HELP or PF1.




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Setting up Installation Wide Options

```
 .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
   Panel  Help
 _____

                          DFSMSrmm Report Generator
 Option ===> 0_____


 0   OPTIONS          - Specify dialog options and defaults
 1   REPORT           - Work with reports
 2   REPORT TYPE      - Work with report types
 3   REPORTING TOOL   - Work with reporting tools
 4   MIGRATION        - Migration tasks for reporting


 Enter selected option or END command. For more info., enter HELP or PF1.





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Setting up Installation Wide Options


```
  .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .

  Panel  Help
  ──────────────────────────────────────────────────────────────────────────────────

                          DFSMSrmm Report Generator
 Option ===> 3_

 0   OPTIONS          - Specify dialog options and defaults
 1   REPORT           - Work with reports
 2   REPORT TYPE      - Work with report types
 3   REPORTING TOOL   - Work with reporting tools
 4   MIGRATION        - Migration tasks for reporting


 Enter selected option or END command. For more info., enter HELP or PF1.




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Setting up Installation Wide Options

```
   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
   Panel  Help
  _____
                            DFSMSrmm Report Options
  Command ===> _____


  Report definition libraries:
    User . . . . . . . . . . . 'SHARAXX.REPORT.LIB'_____
    Installation . . . . . . . _____
    Product  . . . . . . . . . 'SYS1.SAMPLIB'_____


  User report JCL library  . . 'SHARAXX.REPORT.JCL'_____












  DFSMSrmm allocates user libraries if they do not exist.
```

Customizing for Personal Use

- The Report Options panel can also be used to designate end user Report Definition and JCL libraries

- The default library names of <userid>.REPORT.LIB and <userid>.REPORT.JCL are automatically allocated and used if a pre-allocated library name is not supplied

- Use the RMM Dialog User Options panel to supply JOBCARD information

Customizing for Personal Use

```
.    .    .    .    .    .    .    .    .    .    .    .    .    .    .    .    .    .    .    .

  Panel  Help
 _____

                     DFSMSrmm Dialog Options Menu
 Option ===> 1_


 1   USER      - Specify processing options
 2   SORT      - Specify list sort options
 3   REPORT    - Specify report options

 Enter selected option or END command. For more info., enter HELP or PF1.












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Customizing for Personal Use

```
   Panel   Help
 _____

                        DFSMSrmm Dialog User Options
 Command ===> _____


 Date format  . . . . .  JULIAN          ( American, European, Iso or Julian )
 Time zone  . . . . . .  ___   LOCAL      ( zone  offsetHH:MM:SS )


 Confirm deletes  . . .  YES             ( Yes or No )


 Processing option  . .  F               F - Foreground, B - Background
 DSNAME case option . .  U               M - Mixed, U - Upper
 Eject option . . . . .  C               C - Convenience, B - Bulk


 Variable reuse . . . .  Y               Y - Yes, N - No


 Job statement information:-

  ===> //SHARA01 JOB (),'RMMLAB',CLASS=A,MSGCLASS=H,
  ===> //      USER=&SYSUID,NOTIFY=&SYSUID
  ===> //*
  ===> //*


       Enter END command to save changes, or CANCEL to end without saving.
```

- The Report Generator comes with sample reports which can be used 'as is' or customized to your specifications

- Before you run your first report, there are a few things you will need to know:

- The name of the RMM Extract dataset or other data file

- The date format used to create the extract

  - The RMM Extract can be Julian (YYYY/DDD), European (DD/MM/YYYY), American (MM/DD/YYYY) and ISO (YYYY/MM/DD)

  - Only Julian and ISO will sort correctly

- What sort product your installation uses

Working with Predefined Reports

```
 .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .

  Panel  Help
 _____

                        DFSMSrmm Report Generator
 Option ===> 1_


 0   OPTIONS        - Specify dialog options and defaults
 1   REPORT         - Work with reports
 2   REPORT TYPE    - Work with report types
 3   REPORTING TOOL - Work with reporting tools
 4   MIGRATION      - Migration tasks for reporting


 Enter selected option or END command. For more info., enter HELP or PF1.






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Working with Predefined Reports

```
   Panel   Help

                        DFSMSrmm Report Definition Search
Command ===>  PRESS ENTER KEY


Report name . .  _____      May be generic.  Leave blank for all reports.


User id . . . .  _____     Leave blank for all user ids.


Select one or more library. Default is all defined libraries.
Libraries (enter S):        Currently defined libraries:
   _   User                  SHARA01.REPORT.LIB
   _   Installation
   _   Product               SYS1.SAMPLIB



The following line commands will be available when the list is displayed:
   A - Add a new report definition    D - Delete a report definition
   G - Generate and save the JCL      H - View the report help information
   J - Edit and submit the JCL        L - List macro assembly results
   M - Browse macros for the report   N - Copy a report definition
   S - Display/change the report      T - Select a reporting tool
```

Working with Predefined Reports


```
   Panel   Help
   _____

                     DFSMSrmm Report Definitions           Row 23 to 37 of 47
   Command ===> _____    Scroll ===> PAGE


   The following line commands are valid: A,D,G,H,J,L,M,N,S, and T


   S Name      Report title                Report type                 User id
   - --------  --------------------------  --------------------------  -------
   _ EDGGBESK  BES Key Index Report        Extended Extract Records     RMM
   _ EDGGDCDS  Data Sets by Storage Group  DFSMS DCOLLECT for Data Sets RMM
   _ EDGGDSNM  Mixed Case data sets Retained Extended Extract Records   DFRMM1
   _ EDGGREPL  Volumes to be replaced,     Extended Extract Records     RMM
   _ EDGGREPV  Volumes to be replaced based o Extended Extract Records  RMM
   _ EDGGR01   Scratch tapes by volume serial Extended Extract Records  RMM
   _ EDGGR02   List of SCRATCH Volumes by Dat Extended Extract Records  RMM
   G EDGGR03   Inventory List by Volume Seria Extended Extract Records  RMM
   = EDGGR04   Inventory List by Dataset Name Extended Extract Records  RMM
   _ EDGGR06   Inventory of Volumes by Locati Extended Extract Records  RMM
   _ EDGGR07   Inventory of Dataset by Locati Extended Extract Records  RMM
   _ EDGGR08   Inventory of Bin by Location,  Extended Extract Records  RMM
   _ EDGGR09   Datasets in Loan Location,     Extended Extract Records  RMM
```

Working with Predefined Reports

```
 Panel   Help
_____

   Panel   Help
  _____

                      DFSMSrmm JCL Help for EDGGR03
Command ===> _____   Scroll ===> PAGE


Help information for the generation of the report JCL.


If during the report generation an extract step is requested:
 - Create report data  . . Y  (Y/N)
then a DFSMSrmm Inventory Management step is included.
The specified parameter for the Input data set of the report
is the output data set of the Inventory management step, and
must be pre-allocated.






Enter END command or press PF3 to continue
```

Working with Predefined Reports

```
   Panel   Help
 _____

                    DFSMSrmm Report Generation - EDGGR03
 Command ===> _

 Enter or change the skeleton variables for the generated JCL:


 Input data set  . . . . .  'RMM.EXTRACT'_____


 Date format . . . . . . .  JULIAN_____
      (American, European, Iso, Julian, or free form)
      Required if you use variable dates (&TODAY) in your selection criteria.


 Create report data  . . N   (Y/N)
      Choose Y if you want an extract step included into your generated JCL.


 Additional skeleton variables, for example if an extract step is included:
 Skeleton Variable_1 . .  DATEFORM(J)_____
 Skeleton Variable_2 . .  'SHARA01.RMMHSKP.MESSAGE'_____
 Skeleton Variable_3 . .  _____
      The skeleton selection depends on the reporting macro . . . : EDGRXEXT
                                        and macro keyword . . . :
   Enter END command to start the report generation or CANCEL
```

Working with Predefined Reports

```
   Panel   Help
 ─────────────────────────────────────────────────────────────────────────
                      DFSMSrmm Report Definitions          Row 23 to 37 of 47
 Command ===> _____    Scroll ===> PAGE


 The following line commands are valid: A,D,G,H,J,L,M,N,S, and T


 S Name     Report title                    Report type                 User id
 - -------- ------------------------------- --------------------------- -------
 _ EDGGBESK BES Key Index Report            Extended Extract Records     RMM
 _ EDGGDCDS Data Sets by Storage Group      DFSMS DCOLLECT for Data Sets RMM
 _ EDGGDSNM Mixed Case data sets Retained   Extended Extract Records     DFRMM1
 _ EDGGREPL Volumes to be replaced,         Extended Extract Records     RMM
 _ EDGGREPV Volumes to be replaced based o  Extended Extract Records     RMM
 _ EDGGR01  Scratch tapes by volume serial  Extended Extract Records     RMM
 _ EDGGR02  List of SCRATCH Volumes by Dat  Extended Extract Records     RMM
 J EDGGR03  Inventory List by Volume Seria  Extended Extract Records     RMM
 _ EDGGR04  Inventory List by Dataset Name  Extended Extract Records     RMM
 _ EDGGR06  Inventory of Volumes by Locati  Extended Extract Records     RMM
 _ EDGGR07  Inventory of Dataset by Locati  Extended Extract Records     RMM
 _ EDGGR08                                                               RMM
 _ EDGGR09    ┌─────────────────────────────────────────────────────┐   RMM
 _ EDGGR10    │  Report JCL EDGGR03 stored on 'SHARA01.REPORT.JCL'   │   RMM
 _ EDGGR11    └─────────────────────────────────────────────────────┘   RMM
 _ EDGGR11  List MultiVolume and MultiFile  Extended Extract Records     RMM
```

Working with Predefined Reports

```
   File   Edit   Edit_Settings   Menu   Utilities   Compilers   Test   Help

EDIT       SHARA01.REPORT.JCL(EDGGR03) - 01.00          Columns 00001 00072
Command ===> _____  Scroll ===> PAGE
****** *************************** Top of Data ****************************
000001 //SHARA01 JOB (),'RMMLAB',CLASS=A,MSGCLASS=H,
000002 //     USER=&SYSUID,NOTIFY=&SYSUID
000003 //*
000004 //*
000005 //*
000006 //*********************************************************************
000007 //**     SKELETON MEMBER EDGSGICE
000008 //**     TAILORED BY THE RMM REPORT GENERATOR FOR REPORT EDGGR03
000009 //*********************************************************************
000010 //*********************************************************************
000011 //**   STEPS TO SOLVE TITLE VARIABLES                           @N2A
000012 //*********************************************************************
000013 //TITVAR1  EXEC PGM=IDCAMS
000014 //SYSPRINT DD SYSOUT=*
000015 //SYSIN    DD *
000016  REPRO INFILE(TTINDD) OUTFILE(TTOUTDD) SKIP(0) COUNT(1)
000017 //TTINDD   DD DSN=RMM.EXTRACT,
000018 //            DISP=SHR
000019 //TTOUTDD  DD DSN=&VTIT,UNIT=SYSALLDA,SPACE=(TRK,1),DISP=(,PASS),
```

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- The Report Generator provides several ways of creating new reports:

    - Start from scratch by adding a new report

    - Create a new report based on an existing Report Definition

    - Create a new report based on an existing Report Type

    - Select a predefined sample report and modify it, saving changes in your own personal report definition library

Creating New Reports

```
   Panel   Help
 ─────────────────────────────────────────────────────────────────────
                        DFSMSrmm Report Definitions        Row 19 to 33 of 47
 Command ===> _____        Scroll ===> PAGE


 The following line commands are valid: A,D,G,H,J,L,M,N,S, and T


 S Name      Report title                Report type                 User id
 - --------  --------------------------  --------------------------  -------
 A EDGGAUD1  SMF Audit of Volumes by Volser SMF Records for Volumes     RMM
 = EDGGAUD2  SMF Audit of Volume by Rack   SMF Records for Volumes      RMM
 _ EDGGAUD3  SMF42 Audit of Volumes by Vols SMF42 Records for Volumes   RMM
 _ EDGGAUD4  SMF42 Audit of Volume by Rack  SMF42 Records for Volumes   RMM
 _ EDGGBESK  BES Key Index Report          Extended Extract Records     RMM
 _ EDGGDCDS  Data Sets by Storage Group    DFSMS DCOLLECT for Data Sets RMM
 _ EDGGDSNM  Mixed Case data sets Retained Extended Extract Records     DFRMM1
 _ EDGGREPL  Volumes to be replaced,       Extended Extract Records     RMM
 _ EDGGREPV  Volumes to be replaced based o Extended Extract Records    RMM
 _ EDGGR01   Scratch tapes by volume serial Extended Extract Records    RMM
 _ EDGGR02   List of SCRATCH Volumes by Dat Extended Extract Records    RMM
 _ EDGGR03   Inventory List by Volume Seria Extended Extract Records    RMM
 _ EDGGR04   Inventory List by Dataset Name Extended Extract Records    RMM
```

Creating New Reports

```
 Panel   Help
 ───────────────────────────────────────────────────────────────────
                     DFSMSrmm Report Definitions        Row 19 to 33 of 47
 Command ===>                                           Scroll ===> PAGE


 The following line commands are valid: A,D,G,H,J,L,M,N,S, and T


 S Name      Report title                  Report type            User id
 - --------  -------                                              -----

 A EDGGAUD1 SMF Aud ┌──────────────────────────────────────────┐  M
   EDGGAUD2 SMF Aud │                                          │  M
   EDGGAUD3 SMF42 A │                                          │  M
   EDGGAUD4 SMF42 A │                                          │  M
   EDGGBESK BES Key │    Enter the report name . . . . MYREPORT_ │  M
   EDGGDCDS Data Se │                                          │  M
   EDGGDSNM Mixed C │                                          │  RMM1
                    └──────────────────────────────────────────┘
   EDGGREPL Volumes to be replaced,        Extended Extract Records  RMM
   EDGGREPV Volumes to be replaced based o Extended Extract Records  RMM
   EDGGR01  Scratch tapes by volume serial Extended Extract Records  RMM
   EDGGR02  List of SCRATCH Volumes by Dat Extended Extract Records  RMM
   EDGGR03  Inventory List by Volume Seria Extended Extract Records  RMM
   EDGGR04  Inventory List by Dataset Name Extended Extract Records  RMM
```

Creating New Reports

```
    Panel  Help
                          DFSMSrmm Report Definitions        Row 19 to 33 of 47
Command ===>

The following l
                   Panel   Help
S Name     Repo
- -------- ----                          Select Report Type     Row 1 to 12 of 32
                   Command ===> _____       Scroll ===> PAGE
A EDGGAUD1 SMF
  EDGGAUD2 SMF
  EDGGAUD3 SMF4    S Report type                     Name
  EDGGAUD4 SMF4    - ------------------------------- --------
  EDGGBESK BES     _ DFSMS DCOLLECT for Data Sets    DCOLLECT
  EDGGDCDS Data    _ DFSMShsm ABARS Report           ARCGWFSR
  EDGGDSNM Mixe    _ DFSMShsm DCOLLECT BACKUP         ARCGDBCK
  EDGGREPL Volu    _ DFSMShsm DCOLLECT DASD CAP       ARCGDDSD
  EDGGREPV Volu    _ DFSMShsm DCOLLECT MIGRATION      ARCGDMIG
  EDGGR01  Scra    _ DFSMShsm DCOLLECT TAPE CAP       ARCGDTAP
  EDGGR02  List    _ DFSMShsm FSR-SMF Records         ARCGFSR2
  EDGGR03  Inve    S Extended Extract Records         EDGRXEXT
  EDGGR04  Inve    = Extract Records for Bins         EDGRSEXT
  EDGGR06  Inve    _ Extract Records for Data Sets    EDGRDEXT
  EDGGR07  Inve    _ Extract Records for Owners       EDGROEXT
                   _ Extract Records for Products     EDGRPEXT
```

Creating New Reports

```
   Panel  Help


                        DFSMSrmm Report Definitions        Row 19 to 33 of 47
   Command ===>

   The following l          Panel   Help

   S Name      Repo                        Select Reporting Tool      Row 1 to 3 of 3
   - -------- ----          Command ===> _____  Scroll ===> PAGE
   A EDGGAUD1 SMF
     EDGGAUD2 SMF           S Reporting tool
     EDGGAUD3 SMF4          - ------------------------------
     EDGGAUD4 SMF4          _  DFSORT
     EDGGBESK BES           S  ICETOOL
     EDGGDCDS Data          _  SYNCTOOL
     EDGGDSNM Mixe          ********************* Bottom of data *********************
     EDGGREPL Volu
     EDGGREPV Volu
     EDGGR01  Scra
     EDGGR02  List
     EDGGR03  Inve
     EDGGR04  Inve
     EDGGR06  Inve
     EDGGR07  Inve
```

Creating New Reports

```
   Panel   Help
 ─────────────────────────────────────────────────────────────────────────
                    DFSMSrmm Report Definition - MYREPORT     Row 1 to 8 of 214
 Command ===> _                                               Scroll ===> PAGE


 Report title . . .  _____       +
 Report footer  . .  _____
 Reporting tool . : ICETOOL                               Report width:      0
 Enter "/" to select option
 _   Edit the help information for this report


 Use END to save changes or CANCEL
 The following line commands are valid: S, and R


 S CO SO  Field name          Column header text                 CW  Len Typ
 - -- ---  ------------------  ---------------------------------  --- --- ---

 *  __ ___  RXTYPE             Record type - C'X'                  6    1 C
 _  __ ___  XVVOLSER           Volume serial number                6    6 C
 _  __ ___  XVPVOL             Previous volume in sequence         9    6 C
 _  __ ___  XVNVOL             Next volume in sequence             7    6 C
 _  __ ___  XVSTVOL            Stacked volume VolSer (SV/LV)       9    6 C
 _  __ ___  XVMDMVID           Multi-dataset multi-volume id       9    8 C
```

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Creating New Reports

```
   Panel   Help
   ───────────────────────────────────────────────────────────────────────
                        DFSMSrmm Report Definitions         Row 23 to 37 of 48
   Command ===> _____      Scroll ===> PAGE


   The following line commands are valid: A,D,G,H,J,L,M,N,S, and T


   S Name      Report title              Report type                  User id
   - --------  ------------------------  ---------------------------  -------
   _ EDGGBESK  BES Key Index Report      Extended Extract Records     RMM
   _ EDGGDCDS  Data Sets by Storage Group  DFSMS DCOLLECT for Data Sets RMM
   _ EDGGDSNM  Mixed Case data sets Retained  Extended Extract Records  DFRMM1
   _ EDGGREPL  Volumes to be replaced,   Extended Extract Records     RMM
   _ EDGGREPV  Volumes to be replaced based o  Extended Extract Records  RMM
   _ EDGGR01   Scratch tapes by volume serial  Extended Extract Records  RMM
   _ EDGGR02   List of SCRATCH Volumes by Dat  Extended Extract Records  RMM
   N EDGGR03   Inventory List by Volume Seria  Extended Extract Records  RMM
   = EDGGR04   Inventory List by Dataset Name  Extended Extract Records  RMM
   _ EDGGR06   Inventory of Volumes by Locati  Extended Extract Records  RMM
   _ EDGGR07   Inventory of Dataset by Locati  Extended Extract Records  RMM
   _ EDGGR08   Inventory of Bin by Location,  Extended Extract Records  RMM
   _ EDGGR09   Datasets in Loan Location,  Extended Extract Records     RMM
```

Creating New Reports

```
   Panel   Help
 ─────────────────────────────────────────────────────────────────────
                      DFSMSrmm Report Definitions        Row 23 to 37 of 48
 Command ===>                                            Scroll ===> PAGE


 The following line commands are valid: A,D,G,H,J,L,M,N,S, and T


 S Name       Report title                    Report type              User id
 - --------  ┌──────────────────────────────────────────────────┐ ----- -------
   EDGGBESK  │                                                  │ s    RMM
   EDGGDCDS  │                                                  │ Sets RMM
   EDGGDSNM  │                                                  │ s    DFRMM1
   EDGGREPL  │   Enter the report name . . . . ANOTHER          │ s    RMM
   EDGGREPV  │                                                  │ s    RMM
   EDGGR01   │                                                  │ s    RMM
   EDGGR02   │                                                  │ s    RMM
 N EDGGR03   Inventory List by Volume Seria Extended Extract Records   RMM
   EDGGR04   Inventory List by Dataset Name Extended Extract Records   RMM
   EDGGR06   Inventory of Volumes by Locati Extended Extract Records   RMM
   EDGGR07   Inventory of Dataset by Locati Extended Extract Records   RMM
   EDGGR08   Inventory of Bin by Location,  Extended Extract Records   RMM
   EDGGR09   Datasets in Loan Location,     Extended Extract Records   RMM
```

Creating New Reports

```
    Panel   Help
  _____

                         DFSMSrmm Report Definitions         Row 1 to 15 of 49
  Command ===> _____    Scroll ===> PAGE


  The following line commands are valid: A,D,G,H,J,L,M,N,S, and T


  S Name      Report title              Report type                User id
  - --------  ------------------------  -------------------------  -------
  S ANOTHER   Inventory List by Volume Seria Extended Extract Records  SHARA01
  = ARCGAB01  ABARS ABACKUP Statistics    DFSMShsm ABARS Report      HSM
  _ ARCGAR01  ABARS ARECOVER Statistics   DFSMShsm ABARS Report      HSM
  _ ARCGDB01  DCOLLECT BACKUP DATA        DFSMShsm DCOLLECT BACKUP   SHARA01
  _ ARCGDD01  DCOLLECT DASD CAPACITY PLANNIN DFSMShsm DCOLLECT DASD CAP  HSM
  _ ARCGDM01  DCOLLECT MIGRATION DATA     DFSMShsm DCOLLECT MIGRATION  HSM
  _ ARCGDT01  DCOLLECT TAPE CAPACITY PLANNIN DFSMShsm DCOLLECT TAPE CAP  HSM
  _ ARCGS001  Statistics for DFSMShsm     DFSMShsm FSR-SMF Records    SHARA01
  _ ARCGS002  Statistics for Backup       DFSMShsm FSR-SMF Records    HSM
  _ ARCGS003  Statistics for Migration    DFSMShsm FSR-SMF Records    HSM
  _ ARCGS004  Statistics for Recall       DFSMShsm FSR-SMF Records    HSM
  _ ARCGS005  Statistics for Recovery     DFSMShsm FSR-SMF Records    HSM
  _ ARCGS006  Statistics for Volume Dump  DFSMShsm FSR-SMF Records    HSM
```

Creating New Reports

```
   Panel   Help
 _____
                      DFSMSrmm Report Definition - ANOTHER      Row 1 to 8 of 214
 Command ===> _                                            Scroll ===> PAGE


 Report title . . . Inventory List by Volume Serial,                        +
 Report footer  . . Removable Media Manager
 Reporting tool . : ICETOOL                              Report width:   248
 Enter "/" to select option
 _   Edit the help information for this report


 Use END to save changes or CANCEL
 The following line commands are valid: S, and R


 S CO SO  Field name              Column header text                 CW  Len Typ
 - -- ---  ------------------      ----------------------------       --- --- ---

 _  1  1A  XVVOLSER                Volume                              6   6 C
 _  2  ___ XDDSNAME                Dataset name                       44  44 C
 _  3  ___ XVVOLSEQ                Volseq                              6   4 C
 _  4  2A  XDDSNSEQ                DSNseq                              6   5 C
 _  5  ___ XDCRTJBN                Creating jobname                   16   8 C
 _  6  ___ XDCRDATE                DSN date created                   16  10 C
```

Selecting a Reporting Tool

- The RMM Report Generator uses ICETOOL as it's default reporting tool

- If your installation does not use DFSORT, you'll have to select a different tool

- The Report Generator can be customized to use other reporting tools

- Use option 'T' to change the tool currently assigned to your report definition

Session 17592   34

Selecting a Reporting Tool

```
   Panel   Help
  _____

                         DFSMSrmm Report Definitions        Row 1 to 15 of 49
  Command ===> _____        Scroll ===> PAGE


  The following line commands are valid: A,D,G,H,J,L,M,N,S, and T


  S Name      Report title                 Report type                 User id
  - --------  ---------------------------  ---------------------------  -------
  T ANOTHER   Inventory List by Volume Seria Extended Extract Records   SHARA01
  = ARCGAB01  ABARS ABACKUP Statistics     DFSMShsm ABARS Report        HSM
  _ ARCGAR01  ABARS ARECOVER Statistics    DFSMShsm ABARS Report        HSM
  _ ARCGDB01  DCOLLECT BACKUP DATA         DFSMShsm DCOLLECT BACKUP     SHARA01
  _ ARCGDD01  DCOLLECT DASD CAPACITY PLANNIN DFSMShsm DCOLLECT DASD CAP  HSM
  _ ARCGDM01  DCOLLECT MIGRATION DATA      DFSMShsm DCOLLECT MIGRATION   HSM
  _ ARCGDT01  DCOLLECT TAPE CAPACITY PLANNIN DFSMShsm DCOLLECT TAPE CAP  HSM
  _ ARCGS001  Statistics for DFSMShsm      DFSMShsm FSR-SMF Records      SHARA01
  _ ARCGS002  Statistics for Backup        DFSMShsm FSR-SMF Records      HSM
  _ ARCGS003  Statistics for Migration     DFSMShsm FSR-SMF Records      HSM
  _ ARCGS004  Statistics for Recall        DFSMShsm FSR-SMF Records      HSM
  _ ARCGS005  Statistics for Recovery      DFSMShsm FSR-SMF Records      HSM
  _ ARCGS006  Statistics for Volume Dump   DFSMShsm FSR-SMF Records      HSM
```

Selecting a Reporting Tool

```
    Panel  Help

                        DFSMSrmm Report Definitions          Row 1 to 15 of 49
 Command ==                                                              AGE

 The follow
              ┌──────────────────────────────────────────────────────────────┐
              │   Panel  Help                                                  │
 S Name       │                                                                │  id
 - --------   │                      Select Reporting Tool    Row 1 to 3 of 3  │  ---
              │ Command ===> _                          Scroll ===> PAGE       │
 T ANOTHER    │                                                                │  A01
   ARCGAB01   │ S Reporting tool                                               │
   ARCGAR01   │ - ---------------------------                                  │
   ARCGDB01   │ _  DFSORT                                                      │  A01
   ARCGDD01   │ _  ICETOOL                                                     │
   ARCGDM01   │ S  SYNCTOOL                                                    │
   ARCGDT01   │ ********************* Bottom of data ************************** │
   ARCGS001   │                                                                │  A01
   ARCGS002   │                                                                │
   ARCGS003   │                                                                │
   ARCGS004   │                                                                │
   ARCGS005   │                                                                │
   ARCGS006   │                                                                │
   ARCGS007   │                                                                │
   ARCGS008   └──────────────────────────────────────────────────────────────┘
```

Selecting a Reporting Tool

```
   Panel   Help
_____

                         DFSMSrmm Report Generator
Option ===> 3_

0   OPTIONS           - Specify dialog options and defaults
1   REPORT            - Work with reports
2   REPORT TYPE       - Work with report types
3   REPORTING TOOL    - Work with reporting tools
4   MIGRATION         - Migration tasks for reporting


Enter selected option or END command. For more info., enter HELP or PF1.










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```

Selecting a Reporting Tool

```
   Panel   Help

                          DFSMSrmm Reporting Tools              Row 1 to 3 of 3
Command ===>                                                    Scroll ===> PAGE


The following line commands are valid: A,C, and D


S Reporting tool                    Exec      Skeleton Colspace Group sort
- ---------------------------       --------  -------- -------- ----------
_ DFSORT                            EDGRGDFS  EDGSGDFS     0       U
C ICETOOL                           EDGRGGEN  EDGSGICE     3       U
_ SYNCTOOL                          EDGRGGEN  EDGSGSYN     3       U
******************************** Bottom of data ********************************
```

Selecting a Reporting Tool

```
   Panel   Help
 ─────────────────────────────────────────────────────────────────────
                        DFSMSrmm Reporting Tools            Row 1 to 3 of 3
 Command ===>                                               Scroll ===> PAGE


 The following line commands are valid: A,C, and D


 S Reporting tool                     Exec      Skeleton Colspace Group sort
 - --------------
   DFSORT            ╔══════════════════════════════════════════════════════╗
 C ICETOOL          ║              Change a Reporting Tool                  ║
   SYNCTOOL         ║                                                        ║
 *****************  ║                                                        ║
                    ║    Reporting tool . : ICETOOL                          ║
                    ║    Exec . . . . . . . EDGRGGEN                          ║
                    ║    Skeleton . . . . . EDGSGICE                          ║
                    ║    Colspace . . . . . 3                                ║
                    ║    Group sort . . . . U                                ║
                    ║                                                        ║
                    ║                                                        ║
                    ║                                                        ║
                    ╚══════════════════════════════════════════════════════╝
```

- A Title and Footer can be added to each page of your report from the Report Definition panel

- Column headers can be customized for each data field included in your report

- Report width is automatically calculated based on the length of currently selected fields

- Column width is based on the longer of the header text or the actual data length

- Default column headings are very descriptive, but should be shortened to reduce overall report width

Using Titles, Headers and Footers

```
   Panel   Help
 ─────────────────────────────────────────────────────────────────────────

                      DFSMSrmm Report Definition - ANOTHER        Row 1 to 8 of 214
 Command ===>                                                     Scroll ===> PAGE


 Report title . . . Another Inventory List by Volume Serial                      +
 Report footer  . . With Shorter Column Headers
 Reporting tool . : SYNCTOOL                                   Report width:   248
 Enter "/" to select option
 _   Edit the help information for this report
 =

 Use END to save changes or CANCEL
 The following line commands are valid: S, and R


 S CO SO  Field name           Column header text                      CW  Len Typ
 - -- ---  ---------------      --------------------------------------  --- --- ---

 _  1  1A XVVOLSER             Volume                                    6    6 C
 _  2 ___ XDDSNAME             Dataset name                             44   44 C
 _  3 ___ XVVOLSEQ             Volseq                                    6    4 C
 _  4  2A XDDSNSEQ             DSNseq                                    6    5 C
 _  5 ___ XDCRTJBN             Creating jobname                         16    8 C
 _  6 ___ XDCRDATE             DSN date created                         16   10 C
 _  7 ___ XDCRTIME             DSN time Created                         16    6 C
 _  8 ___ XVEXPDT              Vol.exp.date                             12   10 C
```

Using Titles, Headers and Footers

```
   Panel   Help
   _____

                    DFSMSrmm Report Definition - ANOTHER    Row 1 to 8 of 214
   Command ===> _____ Scroll ===> PAGE


   Report title . . . Another Inventory List by Volume Serial           +
   Report footer  . . With Shorter Column Headers
   Reporting tool . : SYNCTOOL                           Report width:  231
   Enter "/" to select option
   _   Edit the help information for this report


   Use END to save changes or CANCEL
   The following line commands are valid: S, and R


   S CO SO  Field name           Column header text               CW  Len Typ
   - -- ---  ------------         ------------------------------   --- --- ---

   _  1  1A XVVOLSER              Volume                            6   6 C
   _  2     XDDSNAME              Dataset name                     44  44 C
   _  3     XVVOLSEQ              Volseq                            6   4 C
   _  4  2A XDDSNSEQ              DSNseq                            6   5 C
   =  5     XDCRTJBN              Create Job                       10   8 C
   _  6     XDCRDATE              Create Date                      11  10 C
   _  7     XDCRTIME              Create Time                      11   6 C
   _  8     XVEXPDT               Expire Date                      11  10 C
```

- The Report Definition panel is also used to control which data fields are selected and how they appear on the report
  - The CO column is used to define the column order of the fields
    - Fields are selected by placing a number in the CO column
    - Selected fields move to the top of the list for easy viewing
    - Numbers can be over-typed if you change your mind and the selected fields will be automatically re-sequenced
  - The SO column indicates the sequence and direction of sort fields
    - Sort fields do not have to appear on the report
    - Use A for Ascending and D for Descending
    - Numbers can be over-typed and will be automatically re-sequenced
  - The S column is used to define Selection Criteria

Selection Criteria, Sorting and Grouping

```
 Panel  Help
─────────────────────────────────────────────────────────────────────────
                      DFSMSrmm Report Definition - ANOTHER    Row 1 to 8 of 214
Command ===>                                                  Scroll ===> PAGE


Report title . . . Another Inventory List by Volume Serial                  +
Report footer  . . With Shorter Column Headers
Reporting tool . : SYNCTOOL                            Report width:  231
Enter "/" to select option
 _   Edit the help information for this report


Use END to save changes or CANCEL
The following line commands are valid: S, and R


S CO SO  Field name              Column header text                CW  Len Typ
- -- ---  ---------------------   ---------------------------       --- --- ---

 _   1  1A XVVOLSER              Volume                              6   6 C
 _   2  ___ XDDSNAME             Dataset name                       44  44 C
 _   3  ___ XVVOLSEQ             Volseq                              6   4 C
 _   4  2A XDDSNSEQ              DSNseq                              6   5 C
 _   5  ___ XDCRTJBN             Create Job                         10   8 C
 _   6  ___ XDCRDATE             Create Date                        11  10 C
 _   7  ___ XDCRTIME             Create Time                        11   6 C
 _   3  _  XVEXPDT               Expire Date                        11  10 C
```

Selection Criteria, Sorting and Grouping

```
 Panel   Help
──────────────────────────────────────────────────────────────────────
                    DFSMSrmm Report Definition - ANOTHER    Row 1 to 8 of 214
Command ===> _____  Scroll ===> PAGE


Report title . . . Another Inventory List by Volume Serial              +
Report footer  . . With Shorter Column Headers
Reporting tool . : SYNCTOOL                             Report width:  231
Enter "/" to select option
  _   Edit the help information for this report


Use END to save changes or CANCEL
The following line commands are valid: S, and R


S CO SO  Field name            Column header text             CW  Len Typ
- -- ---  --------------------  ----------------------------   --- --- ---

_   1  1A XVVOLSER              Volume                          6   6 C
_   2 ___ XDDSNAME              Dataset name                   44  44 C
_   3 ___ XVEXPDT               Expire Date                    11  10 C
_   4 ___ XVVOLSEQ              Volseq                          6   4 C
_   5  2A XDDSNSEQ              DSNseq                          6   5 C
_   6 ___ XDCRTJBN              Create Job                     10   8 C
_   7 ___ XDCRDATE              Create Date                    11  10 C
_   8 ___ XDCRTIME              Create Time                    11   6 C
```

Selection Criteria, Sorting and Grouping

```
  Panel   Help
_____

                    DFSMSrmm Report Definition - ANOTHER    Row 9 to 16 of 214
Command ===> _____ Scroll ===> PAGE


Report title . . . Another Inventory List by Volume Serial                +
Report footer  . . With Shorter Column Headers
Reporting tool . : SYNCTOOL                              Report width:  231
Enter "/" to select option
_   Edit the help information for this report


Use END to save changes or CANCEL
The following line commands are valid: S, and R


S CO SO  Field name          Column header text                  CW  Len Typ
- -- ---  ------------------  ----------------------------------  --- --- ---

_   9 ___ XVLRDDAT            Vol.date last read                   18  10 C
_  10 ___ XVLWTDAT            Vol.date last write                  19  10 C
_  11 ___ XVLABEL             Label type                           10   3 C
_  12 ___ XVMEDREC            Vol.recfm                             9   8 C
_  13 ___ XVSTATUS            Volstat                               8   8 C
_  14 ___ XVVRS               VRS retained                         12   1 C
_   G ___ XVSTORID            Location                              8   8 C
*  ___ ___ RXTYPE             Record type - C'X'                    6   1 C
```

Selection Criteria, Sorting and Grouping

```
 Panel  Help
──────────────────────────────────────────────────────────────────────
                     DFSMSrmm Report Definition - ANOTHER     Row 1 to 8 of 214
Command ===>                                                  Scroll ===> PAGE


Report title . . .  Another Inventory List by Volume Serial                  +
Report footer  . .  With Shorter Column Headers
Reporting tool . :  SYNCTOOL                               Report width:   220
Enter "/" to select option
_   Edit the help information for this report


Use END to save changes or CANCEL
The following line commands are valid: S, and R


S CO SO  Field name               Column header text               CW  Len Typ
- -- ---  ------------------       ------------------------------   --- --- ---

_  G  1A XVSTORID                 Location                           8   8 C
S  1  2A XVVOLSER                 Volume                             6   6 C
S  2 ___ XDDSNAME                 Dataset name                      44  44 C
_  3 ___ XVEXPDT                  Expire Date                       11  10 C
_  4 ___ XVVOLSEQ                 Volseq                             6   4 C
_  5  3A XDDSNSEQ                 DSNseq                             6   5 C
_  6 ___ XDCRTJBN                 Create Job                        10   8 C
_  7 ___ XDCRDATE                 Create Date                       11  10 C
```

Selection Criteria, Sorting and Grouping

```
 Panel  Help
_____
                      DFSMSrmm Report Criteria - ANOTHER      Row 1 to 4 of 4
Command ===> _____  Scroll ===> PAGE


Report title : Another Inventory List by Volume Serial              Extr


Use END to save changes or CANCEL
The following line commands are valid: B,D,N,P,R,T, and I (for details)
Operators: EQ = NE <> GT > GE >= LT < LE <= IN BW SE SN BO BM BZ NO NM NZ
Conjunction: AND, OR, AND(, )AND


S Field name           Op Compare value(s)                     Conj Len Typ
- ----------------     -- -----------------------------------  ---- --- ---
                         +
_ RXTYPE               EQ X_____    AND    1 C__
_ XVSTATUS             EQ MASTER_____   AND    8 C__
_ XVVOLSER             BW 000000,299999_____  AND    6 C__
I XDDSNAME             __ _____           44 C__
******************************* Bottom of data *******************************
```

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Selection Criteria, Sorting and Grouping

```
 Panel   Help
 _____

                    DFSMSrmm Report Criteria - ANOTHER
 Command ===>                                             Scroll ===> PAGE


 Report title : Another Inventory List by Volume Serial            Extr
 ┌─────────────────────────────────────────────────────────────────────┐
 │               DFSMSrmm Report Criteria Details - ANOTHER             │
 │                                                                      │
 │                                                                      │
 │                                                                      │
 │    Field name . . . . . : XDDSNAME                                   │
 │    Operation  . . . . . . EQ                                         │
 │    Enter "/" to select additional options:                          │
 │    _   Select from available equated values                         │
 │    Or enter compare value(s):                                        │
 │    Compare value(s) . . OFFSITE                                   +  │
 │    Conjunction  . . . . AND                                          │
 │    Substring position   6                                            │
 │    Substring length . . 7                                            │
 │    Orig field length  :    44                                        │
 │    Type . . . . . . . . C         Original field type . . . : C      │
 │                                                                      │
 │                                                                      │
 └─────────────────────────────────────────────────────────────────────┘
```

Selection Criteria, Sorting and Grouping

```
_HELP ---------------------- Operator (3) ---------------------- HELP

                                                            More:      +

  Op     Use this data column to specify the logical operator
 -(3)-   for the comparison of the field name with the compare
  GE     values(s).


 Possible values:
            EQ or =    - Equal
            NE or <>   - Not equal
            GT or >    - Greater than
            GE or >=   - Greater than or equal
            LT or <    - Less than
            LE or <=   - Less than or equal to
            IN         - In (Specify a list of possible values,
                         separated by a comma)
            BW         - Between (Specify two inclusive values,
                         separated by a comma)
            SE         - Substring Equal (the compare value is
                         anywhere in the field)
            SN         - Substring Not equal (the compare value
                         is nowhere in the field)
```

- Compare value is case sensitive

- Conjunctions:
  - AND condition
  - OR condition
  - AND(beginning of a nested conjunction
  -)AND end of a nested conjunction

- Substring Position
  - Starting position of field

- Substring Length
  - Data length to be compared

Selection Criteria, Sorting and Grouping

```
   Panel   Help

                          DFSMSrmm Report Definition - ANOTHER      Row 1 to 8 of 214
   Command ===>                                                     Scroll ===> PAGE


   Report title . . .  Another Inventory List by Volume Serial                    +
   Report footer  . .  With Shorter Column Headers
   Reporting tool . :  SYNCTOOL                               Report width:   220
   Enter "/" to select option
   _   Edit the help information for this report


   Use END to save changes or CANCEL
   The following line commands are valid: S, and R


   S CO SO  Field name             Column header text                 CW   Len Typ
   - -- ---  ---------------------   ----------------------------------  --- --- ---

   _  G  1A  XVSTORID               Location                            8    8 C
   *  1  2A  XVVOLSER               Volume                              6    6 C
   *  2      XDDSNAME               Dataset name                        44  44 C
   _  3      XVEXPDT                Expire Date                         11  10 C
   _  4      XVVOLSEQ               Volseq                              6    4 C
   _  5  3A  XDDSNSEQ               DSNseq                              6    5 C
   _  6      XDCRTJBN               Create Job                          10   8 C
   _  7      XDCRDATE               Create Date                         11  10 C
```

Generating and Saving the Report JCL

- Once your AdHoc report is customized it's time to give it a test run

- Use the 'G' option to generate the JCL

- If your installation allows, you can request that an RMM CDS Extract step is added to the beginning of your JCL

- Use the 'J' option to edit and/or submit the JCL

Generating and Saving the Report JCL


```
   Panel   Help

                            DFSMSrmm Report Definitions          Row 1 to 15 of 49
Command ===> _____     Scroll ===> PAGE


The following line commands are valid: A,D,G,H,J,L,M,N,S, and T


S Name       Report title              Report type                 User id
- --------   --------------------      ---------------------------  -------
G ANOTHER    Another Inventory List by Volu Extended Extract Records   SHARA01
= ARCGAB01   ABARS ABACKUP Statistics     DFSMShsm ABARS Report       HSM
_ ARCGAR01   ABARS ARECOVER Statistics    DFSMShsm ABARS Report       HSM
_ ARCGDB01   DCOLLECT BACKUP DATA         DFSMShsm DCOLLECT BACKUP     SHARA01
_ ARCGDD01   DCOLLECT DASD CAPACITY PLANNIN DFSMShsm DCOLLECT DASD CAP  HSM
_ ARCGDM01   DCOLLECT MIGRATION DATA      DFSMShsm DCOLLECT MIGRATION  HSM
_ ARCGDT01   DCOLLECT TAPE CAPACITY PLANNIN DFSMShsm DCOLLECT TAPE CAP  HSM
_ ARCGS001   Statistics for DFSMShsm      DFSMShsm FSR-SMF Records     SHARA01
_ ARCGS002   Statistics for Backup        DFSMShsm FSR-SMF Records     HSM
_ ARCGS003   Statistics for Migration     DFSMShsm FSR-SMF Records     HSM
_ ARCGS004   Statistics for Recall        DFSMShsm FSR-SMF Records     HSM
_ ARCGS005   Statistics for Recovery      DFSMShsm FSR-SMF Records     HSM
_ ARCGS006   Statistics for Volume Dump   DFSMShsm FSR-SMF Records     HSM
_ ARCGS007   Statistics for Restore from Du DFSMShsm FSR-SMF Records   HSM
_ ARCGS008   Statistics for FRBACKUP      DFSMShsm FSR-SMF Records     HSM
```

Generating and Saving the Report JCL

```
 Panel  Help

──────────────────────────────────────────────────────────────────────

   Panel  Help

  ──────────────────────────────────────────────────────────────────

                       DFSMSrmm JCL Help for ANOTHER

 Command ===> _                                        Scroll ===> PAGE


 Help information for the generation of the report JCL.


 If during the report generation an extract step is requested:
  - Create report data  . . Y  (Y/N)
 then a DFSMSrmm Inventory Management step is included.
 The specified parameter for the Input data set of the report
 is the output data set of the Inventory management step, and
 must be pre-allocated.






 Enter END command or press PF3 to continue
```

Generating and Saving the Report JCL

```
  Panel   Help
  _____

                  DFSMSrmm Report Generation - ANOTHER
  Command ===> _____


  Enter or change the skeleton variables for the generated JCL:


  Input data set  . . . . 'SHARA01.RMM.EXTRACT'_____


  Date format . . . . . . JULIAN_____
      (American, European, Iso, Julian, or free form)
      Required if you use variable dates (&TODAY) in your selection criteria.


  Create report data  . . Y   (Y/N)
      Choose Y if you want an extract step included into your generated JCL.


  Additional skeleton variables, for example if an extract step is included:
  Skeleton Variable_1 . . DATEFORM(J)_____
  Skeleton Variable_2 . . 'SHARA01.RMMHSKP.MESSAGE'_____
  Skeleton Variable_3 . . _____
      The skeleton selection depends on the reporting macro . . . : EDGRXEXT
                                       and macro keyword . . :
    Enter END command to start the report generation or CANCEL
```

Generating and Saving the Report JCL

```
 Panel   Help
 ─────────────────────────────────────────────────────────────────────

                          DFSMSrmm Report Definitions          Row 1 to 15 of 49
 Command ===> _____  Scroll ===> PAGE


 The following line commands are valid: A,D,G,H,J,L,M,N,S, and T


 S Name      Report title                   Report type                  User id
 - --------  -----------------------------  ---------------------------  -------
 J ANOTHER   Another Inventory List by Volu Extended Extract Records     SHARA01
 _ ARCGAB01  ABARS ABACKUP Statistics       DFSMShsm ABARS Report        HSM
 = ARCGAR01  ABARS ARECOVER Statistics      DFSMShsm ABARS Report        HSM
 _ ARCGDB01  DCOLLECT BACKUP DATA           DFSMShsm DCOLLECT BACKUP      SHARA01
 _ ARCGDD01  DCOLLECT DASD CAPACITY PLANNIN DFSMShsm DCOLLECT DASD CAP    HSM
 _ ARCGDM01  DCOLLECT MIGRATION DATA        DFSMShsm DCOLLECT MIGRATION   HSM
 _ ARCGDT01  DCOLLECT TAPE CAPACITY PLANNIN DFSMShsm DCOLLECT TAPE CAP    HSM
 _ ARCGS001  Statistics for DFSMShsm        DFSMShsm FSR-SMF Records      SHARA01
 _ ARCGS002  Statistics for Backup          DFSMShsm FSR-SMF Records      HSM
 _ ARCGS003  Statistics for Migration       DFSMShsm FSR-SMF Records      HSM
 _ ARCGS004  Statistics for Recall          DFSMShsm FSR-SMF Records      HSM
 _ ARCGS005                                                               HSM
 _ ARCGS006    ┌──────────────────────────────────────────────────────┐ HSM
 _ ARCGS007    │ Report JCL ANOTHER stored on 'SHARA01.REPORT.JCL'     │ HSM
 _ ARCGS008  Statistics for FRBACKUP    │   DFSMShsm FSR-SMF Records      HSM
              └──────────────────────────────────────────────────────┘
```

Generating and Saving the Report JCL

```
   File   Edit   Edit_Settings   Menu   Utilities   Compilers   Test   Help

 EDIT        SHARA01.REPORT.JCL(ANOTHER) - 01.00          Columns 00001 00072
 Command ===> _                                           Scroll ===> PAGE
 ****** ************************* Top of Data *******************************
 000001 //SHARA01 JOB (),'RMMLAB',CLASS=A,MSGCLASS=H,
 000002 //     USER=&SYSUID,NOTIFY=&SYSUID
 000003 //*
 000004 //*
 000005 //*
 000006 //***************************************************************
 000007 //**     SKELETON MEMBER EDGSGSYN
 000008 //**     TAILORED BY THE RMM REPORT GENERATOR FOR REPORT ANOTHER
 000009 //***************************************************************
 000010 //STEP01  EXEC PGM=EDGHSKP,PARM='RPTEXT,DATEFORM(J)',REGION=32M
 000011 //SYSPRINT DD SYSOUT=*
 000012 //MESSAGE  DD DSN=SHARA01.RMMHSKP.MESSAGE,
 000013 //           DISP=SHR
 000014 //XREPTEXT DD DSN=SHARA01.RMM.EXTRACT,
 000015 //           DISP=SHR
 000016 //***************************************************************
 000017 //**  STEPS TO SOLVE TITLE VARIABLES                        @N2A
 000018 //***************************************************************
 000019 //TITVAR1  EXEC PGM=IDCAMS
```

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Generating and Saving the Report JCL

```
  File   Edit   Edit_Settings   Menu   Utilities   Compilers   Test   Help
─────────────────────────────────────────────────────────────────────────────
EDIT         SHARA01.REPORT.JCL(ANOTHER) - 01.00          Columns 00001 00072
Command ===> _                                            Scroll ===> PAGE
000056 //SYSPROC  DD DISP=SHR,DSN=SYS1.SEDGEXE1
000057 //SYSTSPRT DD SYSOUT=*
000058 //DATEFMT  DD *
000059 DATE PATTERN:YYYY/DDD
000060 //INCLIN   DD *
000061  OPTION VLSHRT,VLSCMP,NOCHALT
000062  INCLUDE COND=((5,1,CH,EQ,C'X'),
000063       AND,
000064             (322,8,CH,EQ,C'MASTER'),
000065       AND,
000066             ((9,6,CH,GE,C'000000'),
000067       AND,
000068             (9,6,CH,LE,C'299999')),
000069       AND,
000070             (814,7,CH,EQ,C'OFFSITE'))
000071  INREC FIELDS=(1,4,
000072          156,8,C' ',
000073          9,6,C' ',
000074          809,44,C' ',
000075          119,10,C' ',
```

Tips & Tricks

- ## Report Types

  – A Report Type is used to describe record types to the Report Generator

  – It identifies the Assembler language mapping macro(s) and keywords that describe the format of the input records

  – Defines a default input data set name

  – You can build your own macros and use Report Types to define them to the Report Generator

  – The Report Generator can then be used to report on almost any data

Tips & Tricks

```
   Panel   Help

                        DFSMSrmm Report Generator
Option ===> 2

0   OPTIONS          - Specify dialog options and defaults
1   REPORT           - Work with reports
2   REPORT TYPE      - Work with report types
3   REPORTING TOOL   - Work with reporting tools
4   MIGRATION        - Migration tasks for reporting

Enter selected option or END command. For more info., enter HELP or PF1.




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```

Select option '2' in order to display and update available Report types

Tips & Tricks

```
 Panel  Help
 ────────────────────────────────────────────────────────────────
                      DFSMSrmm Report Types           Row 8 to 11 of 32
 Command ===> _____  Scroll ===> CSR

 The following line commands are valid: A,C,D,H,L,M,R, and S

 S Name      Description
 - --------  ------------------------------------------------------------
 A EDGRXEXT Extended Extract Records
     Macro library . . :   'SYS1.MACLIB'
     Applicable macros :   EDGRXEXT
     Input data set. . :   'LHANNA.CDS.EEXTRACT'

 _ EDGRSEXT Extract Records for Bins
     Macro library . . :   'SYS1.MACLIB'
     Applicable macros :   EDGRSEXT
     Input data set. . :   'RMM.EXTRACT'

 _ EDGRDEXT Extract Records for Data Sets
     Macro library . . :   'SYS1.MACLIB'
     Applicable macros :   EDGRDEXT
     Input data set. . :   'RMM.EXTRACT'

 _ EDGROEXT Extract Records for Owners
     Macro library . . :   'SYS1.MACLIB'
     Applicable macros :   EDGROEXT
     Input data set. . :   'RMM.EXTRACT'
```

Either create your own type from scratch or copy an existing one.

Tips & Tricks

```
 Panel  Help

                        DFSMSrmm Report Types           Row 9 to 12 of 33
Command ===>                                            Scroll ===> PAGE

The following line commands are valid: A,C,D,H,L,M,R, and S

S Name      Description
┌──────────────────────────────────────────────────────────────────────┐
│                         Add a Report Type                              │
│  Command ===> _____       │
│                                                                        │
│  Report type name  . . _____                                        │
│  Description . . . . . XExtract Recs with DSN/VOL#                      │
│  Macro library . . . . 'DNET218.MACLIB'                                │
│  Applicable macros:   Macro    Keywords (LEFT / RIGHT to scroll or EXPAND)│
│                . . . EDGXXEXT _____  +       │
│                . . . _____ _____  +       │
│                . . . _____ _____  +       │
│                . . . _____ _____  +       │
│                . . . _____ _____  +       │
│  RDW in 1st macro  . . N  (Y/N)                                         │
│  Input data set  . . . 'DNET218.RMM.EXTRACT.FIXED'                      │
│                                                                        │
└──────────────────────────────────────────────────────────────────────┘

     Applicable macros :  EDGROEXT
     Input data set. . :  'RMM.EXTRACT'
```

Change name,
description and source
library.

Default dataset name
for input extract can
also be listed along
with RDW if its VB.

Tips & Tricks

```
   Menu  Utilities  Compilers  Help

 BROWSE     DNET218.MACLIB(EDGXXEXT) - 01.02        Line 00000530 Col 001 080
 Command ===>                                       Scroll ===> CSR
*                                   after compression ( FACTORED ) @SOA 05300000
XdLRED           DS   CL5           LASTREF extra days            @OQA 05310000
XvEXRB           DS   CL9           EXPDT retainby                @OSA 05320000
XXDUMMY          DS   CL28          FILLER                        LAH  05320102
XVOLCNT          DS   ZL1           Used to count volumes         LAH  05321002
XDSNCNT          DS   ZL1           Used to count datasets        LAH  05322002
XXRCEND  DS   0C                    End of RXEXT                        05323001
RXRCLNG  EQU  XXRCEND-XXEXT         Length of RXEXT                     05324001
         POP  PRINT                                                     05325000
         MEND , */                                                     05326000
*%EDGXXEXT1:;                                                          05327000
*%IHALPUSH = '@LISTPUSH';                                              05328000
*%IHALOFF  = '@LISTOFF';                                               05329000
*%IHALPOP  = '@LISTPOP';                                               05330000
*IHALPUSH;                                                             05340000
*%IF IHALIST='YES' %THEN                                               05350000
* %GOTO EDGXXEXT7;                                                     05360000
*IHALOFF;                                                              05370000
*%EDGXXEXT7:; /* P L S M A P P I N G S T A R T */                      05380000
*/******************************************************************/ 05390000
*/*                                                              */ 05400000
*/* Common Name:       RMM Extract File Extended Data Set Record */ 05410000
*/* Macro ID:          EDGXXEXT                                  */ 05420000
*/* DSECT Name:        RXEXT                                     */ 05430000
*/* Owning Component:  DFSMSrmm (DF186)                          */ 05440000
*/* Eye-Catcher ID:    X                                         */ 05450000
*/* Storage Attributes: Subpool:   N/A                           */ 05460000
*/*                     Key:       N/A                           */ 05470000
```

Copy original definition and update it to reflect the modified extract you will use for input.

Tips & Tricks

```
   Menu   Utilities  Compilers  Help

 BROWSE     DNET218.CLIST(COPYEXT) - 01.07          Line 00000000 Col 001 080
 Command ===> _____     Scroll ===> CSR_
 ******************************* Top of Data ********************************
/* Rexx */

  done = 0
  Do Forever Until done
   'EXECIO 5000 DISKR RPTEXTI ( STEM RPTEXTI.'
    If rc > 0 Then
      done = 1
    Do x = 1 To rptexti.0
      If Substr(rptexti.x,1,1) ¬= 'X' Then Do
        rptexto.x = Substr(rptexti.x,1,1797)
        Iterate
      End
      tst_dsq = Strip(Substr(rptexti.x,1322,5),'L')
      If tst_dsq < 2 Then
        vol = '1'
      Else
        vol = ' '
      rptexto.x = Substr(rptexti.x,1,1797)||vol||'1'
    End
   'EXECIO' rptexti.0 'DISKW RPTEXTO ( STEM RPTEXTO.'
  End
 Exit
 ***************************** Bottom of Data ******************************
```

This Rexx will append a 1 to the end of every record for each dataset and volume

Tips & Tricks

```
   Menu   Utilities   Compilers   Help

 BROWSE      DNET218.JCL(COPYEXT) - 01.01            Line 00000000 Col 001 080
 Command ===> _____      Scroll ===> CSR
 ******************************* Top of Data ********************************
 //HANNARMM JOB CLASS=A,MSGCLASS=H,TIME=1440,NOTIFY=DNET218
 //*
 //COPYEXT   EXEC PGM=IKJEFT01,PARM='%COPYEXT'
 //SYSPROC   DD DISP=SHR,DSN=DNET218.CLIST
 //RPTEXTI   DD DISP=SHR,DSN=DNET218.RMM.EXTRACT
 //RPTEXTO   DD DISP=OLD,DSN=DNET218.RMM.EXTRACT.FIXED
 //SYSTSPRT DD SYSOUT=*
 //SYSTSIN   DD DUMMY
 //
 ***************************** Bottom of Data *******************************
```

The JCL …

Tips & Tricks

```
  Menu  Utilities  Compilers  Help

BROWSE     DNET218.RMM.EXTRACT.FIXED           Line 00000027 Col 01721
Command ===> _____ Scroll ===> CSR
     1.46     97281  1.09      6142     0                                  1
     1.46     97281  1.78      3066     0                                 11
     0.00         0                                                       11
     1.35    135877  1.34      4410     0                                  1
     1.35    135877  1.72      2943     0                                  1
     1.35    135877  1.11      5704     0                                  1
     1.35    135877  1.58      2495     0                                  1
     1.35    135877  1.05      2495     0                                  1
     1.35    135877  1.33       702     0                                  1
     1.35    135877  1.24       896     0                                  1
     1.35    135877  3.74        61     0                                  1
     1.35    135877  1.90      2373     0                                  1
     1.35    135877  1.15      5948     0                                  1
     1.35    135877  1.04      6529     0                                  1
     1.35    135877  1.10      6142     0                                  1
     1.35    135877  1.61      2434     0                                  1
     1.35    135877  1.25      2689     0                                  1
     1.35    135877  1.12      2811     0                                  1
     1.35    135877  1.09      6274     0                                  1
     1.35    135877  1.80      2108     0                                  1
     1.35    135877  1.03      5510     0                                  1
     1.35    135877  1.05      5246     0                                  1
     1.35    135877  1.35      1792     0                                  1
     1.35    135877  1.36      4094     0                                  1
     1.35    135877  1.10      6203     0                                  1
     1.35    135877  1.36      4359     0                                  1
     1.35    135877  1.33      4543     0                                  1
     1.35    135877  1.51     24895     0                                  1
```

The Extract …

Session 17592   67

Tips & Tricks

```
   Panel   Help
   ───────────────────────────────────────────────────────────────────────
                       DFSMSrmm Report Definition - TESTTYPE   Row 1 to 16 of 217
   Command ===>                                                 Scroll ===> PAGE

   Report title . . . Master Volume/Dataset Report                          +
   Report footer  . . Test VOL and DSN counters
   Reporting tool . : ICETOOL                          Report width:    31
   Enter "/" to select option
   _   Edit the help information for this report


   Use END to save changes or CANCEL
   The following line commands are valid: S, and R


   S CO SO  Field name          Column header text               CW  Len Typ
   - -- ---  ------------------  -------------------------------- --- --- ---
   _  1 ___  XVVOLSER            Volume serial number              6   6 C
   * 2 ___  XVSTATUS            Volume status                     8   8 C
   _  3 ___  XVOLCNT             Vols                              4   1 N
   _  4 ___  XDSNCNT             Dsns                              4   1 N
   * __ ___  RXTYPE              Record type - C'X'                6   1 C
   _ __ ___  XVPVOL              Previous volume in sequence       9   6 C
   _ __ ___  XVNVOL              Next volume in sequence           7   6 C
   _ __ ___  XVSTVOL             Stacked volume VolSer (SV/LV)     9   6 C
   _ __ ___  XVMDMVID            Multi-dataset multi-volume id     9   8 C
   _ __ ___  XVCRDATE            Create date of volume record     10  10 C
   _ __ ___  XVCRTIME            Create time volume record (hhmms 10   6 C
   _ __ ___  XVCRSID             Create system id of volume recor 10   8 C
   _ __ ___  XVLCDATE            Last change date of volume recor 10  10 C
   _ __ ___  XVLCTIME            Last change time of volume recor 10   6 C
   _ __ ___  XVLCUID             Last change user id of volume     9   8 C
   _ __ ___  XVLCSID             Last change system id of volume  10   8 C
```

The Definition …

Tips & Tricks

```
   Display  Filter  View  Print  Options  Search  Help
------------------------------------------------------------------------------
 SDSF OUTPUT DISPLAY HANNAZAL JOB11196  DSID    108 LINE 1,456   COLUMNS 02- 81
 COMMAND INPUT ===>                                          SCROLL ===> CSR
------   --------   -----   -----
300149   MASTER         0       1
300149   MASTER         1       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         0       1
300150   MASTER         1       1

Test VOL and DSN counters
                          62    1323
**************************** BOTTOM OF DATA *****************************
```

The Report …

SHARE in Orlando 2015

- **Reporting Tools**

  - The Report Generator is used to build control statements that are used by a reporting utility such as DFSORT's ICETOOL
  - Report Tool definitions are provided for ICETOOL and SYNCTOOL
    - A common exec supports both. Unique ISPF Skeletons are used
  - The Report Tool definition tells the Report Generator which REXX EXEC is used to build the correct control statements for the desired reporting utility
  - It also allows you to specify how many spaces should separate report columns and whether Unique or Mixed grouping is supported by the utility
  - You can write your own REXX routines to support other reporting utilities and define them to the Report Generator using a Report Tool definition
  - Refer to the "DFSMSrmm Reporting" manual, "Chapter 2. Using the DFSMSrmm Report Generator", under the section "Writing Reporting Tool EXECs" for more information on the REXX variables used by the Report Generator

Tips & Tricks

```
  Panel  Help

                        DFSMSrmm Report Generator
Option ===> 3

0   OPTIONS          - Specify dialog options and defaults
1   REPORT           - Work with reports
2   REPORT TYPE      - Work with report types
3   REPORTING TOOL   - Work with reporting tools
4   MIGRATION        - Migration tasks for reporting

Enter selected option or END command. For more info., enter HELP or PF1.




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```

Its also possible to create custom reporting tools …

Tips & Tricks

```
   Panel   Help
 ──────────────────────────────────────────────────────────────────────────
                        DFSMSrmm Reporting Tools            Row 1 to 5 of 5
 Command ===> _____     Scroll ===> CSR

 The following line commands are valid: A,C, and D


 S Reporting tool                   Exec     Skeleton Colspace Group sort
 - ----------------------------     -------- -------- -------- ----------
 _ DFSORT                           EDGRGDFS EDGSGDFS    0        U
 A ICETOOL                          EDGRGGEN EDGSGICE    3        U
 _ ICETOOL 1SP                      EDGRGGEN EDGSGICE    1        U
 _ SAS                              EDGRGSAS EDGSGSAS    3        U
 _ SYNCTOOL                         EDGRGGEN EDGSGSYN    3        U
 ***************************** Bottom of data *********************************
```

Start by copying an existing definition or create from scratch …

Tips & Tricks

```
 Panel  Help

                         DFSMSrmm Reporting Tools           Row 1 to 5 of 5
 Command ===>                                               Scroll ===> CSR


 The following line commands are valid: A,C, and D


 S Reporting tool                    Exec      Skeleton Colspace Group sort
 - ----------
   DFSORT              ┌──────────────────────────────────────────────┐
   ICETOOL             │             Add a Reporting Tool             │
   ICETOOL 1S          │                                              │
 A SAS                 │ Reporting tool . . _____  │
   SYNCTOOL            │ Exec . . . . . . . EDGRGSAS                   │
 ************          │ Skeleton . . . . . EDGSGSAS                   │ ****
                       │ Colspace . . . . . 3                         │
                       │ Group sort . . . . U                         │
                       │                                              │
                       └──────────────────────────────────────────────┘
```

You will also need to create the Exec to process data from the panel to generate valid syntax for the JCL skeleton …

Session 17592

- # Relative Date Comparisons
  - You can use &TODAY alone or with **+** or **–** n days, months or years to perform date checking relative to the report run date
    - 'n' is limited to 365 days, or 60 months, or 50 years
    - Example:
    - XDCRDATE GE &TODAY – 2 Months
    - Will select all datasets created within the last two months

- # Field to Field Comparisons
  - You can use &FIELD= to check one field against data contained in another field
    - Example:
    - XVOWNID NE &FIELD=XVCRUID
    - Will only select records if the content of field XVOWNID is not equal to the content of field XVCRUID

Sample Reports

Name	Report Title	Report Type
ARCGAB01	ABARS ABACKUP Statistics	ABARS
ARCGAR01	ABARS ARECOVER Statistics	ABARS
ARCGDB01	DCOLLECT BACKUP Data	DCOLLECT BACKUP
ARCGDD01	DCOLLECT DASD CAPACITY PLANNING	DCOLLECT DASD CAPACITY
ARCGDM01	DCOLLECT MIGRATION Data	DCOLLECT MIGRATION
ARCGDT01	DCOLLECT TAPE CAPACITY PLANNING	DCOLLECT TAPE CAPACITY
ARCGS001	DFSMShsm Statistics	DCOLLECT TAPE CAP
ARCGS002	Backup Statistics	DFSMShsm FSR-SMF Records
ARCGS003	Migration Statistics	DFSMShsm FSR-SMF Records
ARCGS004	Recall Statistics	DFSMShsm FSR-SMF Records
ARCGS005	Recover Statistics	DFSMShsm FSR-SMF Records
ARCGS006	Volume Dump Statistics	DFSMShsm FSR-SMF Records
ARCGS007	Restore from Dump Statistics	DFSMShsm FSR-SMF Records
ARCGS008	FRBACKUP Statistics	DFSMShsm FSR-SMF Records
ARCGS009	FRRECOV Statistics	DFSMShsm FSR-SMF Records
ARCGS010	DFSMShsm Thrashing	DFSMShsm FSR-SMF Records

Summary

- The RMM Report Generator is a full featured tool that can help simplify the process of creating and managing 'AdHoc' reports

- It has many supplied samples and offers several ways to customize the product to meet your needs

- Includes RMM, HSM, and SMS Report Types and Sample Reports

- It can also be used to report on almost any data

- Context sensitive help screens provide useful information to assist you when generating reports

- The RMM Report Generator is documented in "DFSMSrmm Reporting" "Chapter 2. Using the DFSMSrmm Report Generator"

- Continues to be Enhanced to enable more flexible reporting and processing

- DFSMSrmm web site: www.storage.ibm.com/software/sms/rmm/