

DFSMS Basics: Storage Reporting using the Report Generator Part 1

Vickie Dault
IBM Corporation

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Agenda

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

- 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
- Inputs for HSM Reports and RMM Reports
- Summary

Introducing the RMM Report Generator

- The RMM Report Generator is an easy to use ISPF application which simplifies the process of creating and managing RMM reports.
- It comes with several predefined reports which can be used out of the box or tailored to your specifications
 - Report Definition Library Contains
 - EDGGTOOL - Report Tool Definitions
 - EDGGRTD - Report Type Definitions
 - members - Report Definitions
 - *EDGG* and ARCG**
- 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

Introducing the RMM Report Generator

- 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

Introducing the RMM Report Generator

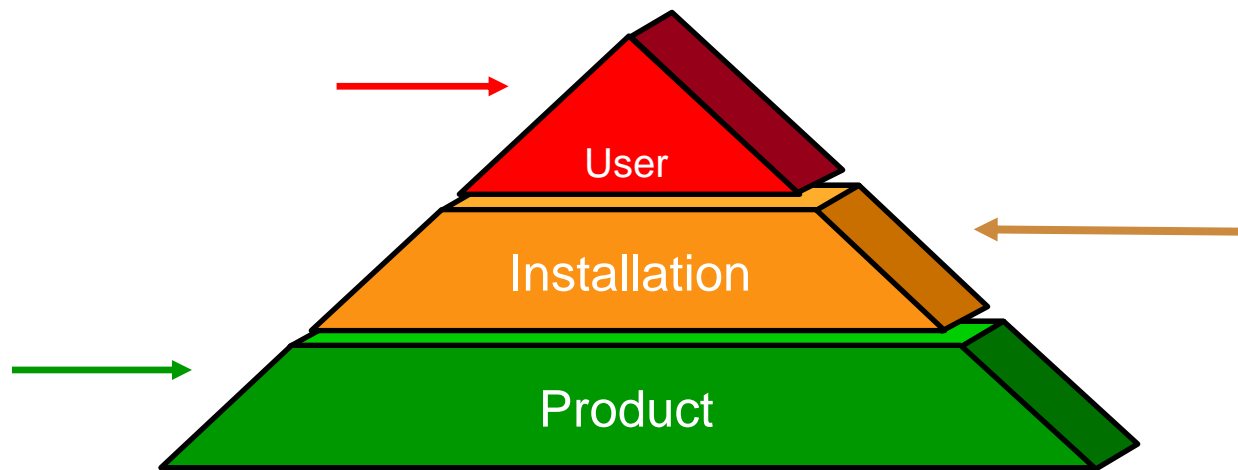
- Starting the Report Generator application
 - Using option 'G' from ISMF *when RMM is not installed.*
 - Using option 'R' from the RMM User or Librarian menus will take you directly to the Report Definition Search panel
 - Option 'R' from the RMM Commands menu takes you to the main Report Generator panel
 - The 'REPORT' **fastpath** command also takes you to the main Report Generator panel and can be used from any other RMM panel

Setting up Installation Wide Options

- **Optionally** customize dataset names in the EDGRMAIN REXX EXEC
- Use the Report Options panel to define the Installation Library; user library and product library default
- 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

- Library Concatenation



Setting up Installation Wide Options

Panel Help

```
-----  
-----  
                REMOVABLE MEDIA MANAGER (DFSMSrmm) - z/OS V1R10  
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

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 Dialog Options Menu

Option ==> 3

- 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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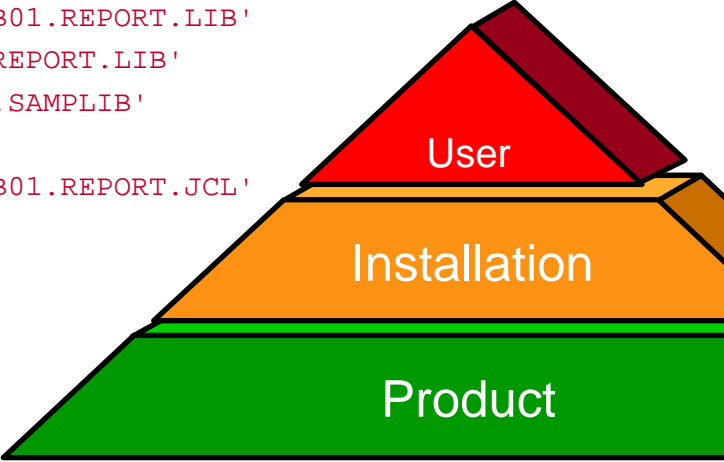
Setting up Installation Wide Options

```
Panel  Help
-----
-----
                                DFSMSrmm Report Options

Command ==>

Report definition libraries:
  User . . . . . 'JOHNB01.REPORT.LIB'
  Installation . . . . . 'RMM.REPORT.LIB'
  Product . . . . . 'SYS1.SAMPLIB'

User report JCL library . . 'JOHNB01.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 allocated and used if a preallocated 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 . . . . . ISO          ( 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

Eject option . . . . C            C - Convenience, B - Bulk

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

Job statement information:-
==> //RPTGEN01 JOB ( ),'RMM RPT GEN',CLASS=A,MSGCLASS=H,MSGLEVEL=(1,1),
==> //                REGION=OM,NOTIFY=&SYSUID
==> //*
==> /*

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


Working with Predefined Reports

- 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:
- What type of records your report needs: **HSM,RMM or User Input**
- The name of the **RMM Extract dataset** or other data file **SMF** or **DCOLLECT**
- The date format used to create the extract
- What sort product your installation uses
- You will use these when generating your report JCL

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

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 ==>
```

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

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

```
Libraries (enter S): Select one or more library.
```

```
  S  User           Default are all defined libraries.  
     Installation  
  S  Product
```

```
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    J - Edit and manually submit the JCL  
  L - List macro assembly results  M - Macros for report type are browsed  
  N - Copy a report definition     S - Display or change the report  
     definition  
  T - Select a reporting tool
```

Working with Predefined Reports

Panel Help

DFSMSrmm Report Definitions

Row 12 to 27 of 40

Command ==>

Scroll ==> PAGE

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

S Name	Report title	Report type	User id
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
ARCGS009	Statistics for FRRecover	<u>DFSMSHsm FSR-SMF Records</u>	HSM
ARCGS010	DFSMSHsm Thrashing Report	DFSMSHsm FSR-SMF Records	HSM
EDGGAUD1	SMF Audit of Volumes by Volser	<u>SMF Records for Volumes</u>	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
EDGGDCDS	Data Sets by Storage Group	<u>DFSMS DCOLLECT for Data Sets</u>	RMM
EDGGDSNM	Mixed Case data sets Retained	<u>Extended Extract Records</u>	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



Working with Predefined Reports

RMM Example

Panel Help

DFSMSrmm Report Generation - EDGGR03

Command ==>

Enter or change the skeleton variables for the generated JCL:

Input data set 'JOHNB01.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, if an extract step is included:

Skeleton Variable_1 . . DATEFORM(J)

Skeleton Variable_2 . . 'JOHNB01.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 NOGEN to cancel

Working with Predefined Reports

HSM Example

Panel Help

DFSMSrmm Report Generation - EDGGR03

Command ==>

Enter or change the skeleton variables for the generated JCL:

~~Input~~ data set 'JOHNB01.HSMSMF.ALTERED'

Date format YYYYDDD

(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, if an extract step is included:

Skeleton Variable_1 . . X('F1') ← SETSYS SMF(xx) value

→ Skeleton Variable_2 . . 'JOHNB01.SMFREC.INPUT'

Skeleton Variable_3 . .

The skeleton selection depends on the reporting macro . . . : EDGRXEXT
and macro keyword . . . :

Enter END command to start the report generation, or NOGEN to cancel

Working with Predefined Reports

Considerations for HSM Reporting

The RMM Report Generator cannot process DFSMSHsm's ARCFSR and ARCWWFSR records.

ARCFSR and ARCWWFSR records are converted to ARCGFSC and ARCGWFSC while running the DFSMSrmm Report Generator. **Specify Y in the Create Report Data Field**

Date format must be set to **YYYYDDD** for DFSMSHsm FSR records.

The Actual INPUT Dataset is specified in Skeleton Variable 2

The reformatted FSR and WWFSR records are in the **Input Data set**

Working with Predefined Reports

```

Panel  Help
-----
                                DFSMSrmm Report Definitions          Row 17 to 31 of 40
Command ===>                                Scroll ===> PAGE

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

S Name      Report title                                Report type                                User id
-----
EDGGAUD1 SMF Audit of Volumes by Volser SMF Records for Volumes RMM
EDGGAUD2 SMF Audit of Volume by Rack SMF Records for Volumes 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  Inventory of Bin by Location Extended Extract Records RMM
EDGGR09  Datasets in Loan Location Extended Extract Records RMM
EDGGR10  Volumes in Loan Location Extended Extract Records RMM
EDGGR11  .------. RMM
EDGGR12  | Report JCL EDGGR03 stored on 'JOHNB01.REPORT.JCL' | RMM
EDGGR13  '-----' RMM
EDGGR14  Movement Report by Volume Seri Extended Extract Records RMM

```


Working with Predefined Reports

RMM Example

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
-----
EDIT          JOHN01.REPORT.JCL(EDGGR03) - 01.01          Columns 00001 00072
Command ==> SUB                                         Scroll ==> PAGE
***** Top of Data *****
000001 //RPTGEN01 JOB (), 'RMM RPT GEN', CLASS=A, MSGCLASS=H, MSGLEVEL=(1,1),
000002 //          REGION=0M, NOTIFY=&SYSUID
000003 //*
000004 //*
000005 //*****
000006 /***      SKELETON MEMBER EDGSGICE
000007 /***      TAILORED BY THE RMM REPORT GENERATOR
000008 //*****
000009 //*****
000010 /***      DATE CALCULATION STEP
000011 /***      COMPARE VALUES CONTAINING ARE CALCULATED BASED ON RUN DATE
000012 //*****
000013 //DATECONV EXEC PGM=IKJEFT01, PARM='%EDGRGDAT'
000014 //SYSPROC DD DISP=SHR, DSN=SYS1.SEDGEXE1
000015 //SYSTSPRT DD SYSOUT=*
000016 //DATEFMT DD *
000017 DATE PATTERN:YYYY/DDD
000018 //INCLIN DD *
000019 OPTION VLSHRT, VLSCMP
```

Working with Predefined Reports

HSM Example

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
-----
EDIT          JOHN01.REPORT.JCL(EDGGR03) - 01.01          Columns 00001 00072
Command ==> SUB                                         Scroll ==> PAGE
***** ***** Top of Data *****
000001 //RPTGEN01 JOB ( ),'RMM RPT GEN',CLASS=A,MSGCLASS=H,MSGLEVEL=(1,1),
000002 //          REGION=0M,NOTIFY=&SYSUID
000003 //*
000004 //*
000005 //*****
000006 //*      FUNCTION  - THIS JCL CONVERTS ARCF SR SMF RECORDS TO ARCF SR2
000007 //*          RECORDS TO BE USED AS INPUT FOR REPORT GENERATOR
000008 //*****
000009 //ARCGFSRC EXEC PGM=SORT
000010 //SYSPRINT DD SYSOUT=*
000011 //SORTIN   DD DISP=SHR,DSN=JOHN01.SMFREC.INPUT
000012 //SORTOUT  DD DISP=(,PASS),
000013 //          UNIT=(SYSALLDA,15),
000014 //          LIKE=JOHN01.SMFREC.INPUT,
000015 //          DSN=JOHN01.HSMSMF.ALTERED,
000016 //          SPACE=(CYL,(200,100),RLSE)
000017 //SORTWK01 DD UNIT=3390,SPACE=(CYL,(150))
000018 //SORTWK02 DD UNIT=3390,SPACE=(CYL,(150))
```

Creating New Reports

- 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 1 to 15 of 17
Command ===>                                Scroll ===> PAGE

The following line commands are valid: A,D,G,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
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  JOHNB01
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
EDGGR10   Volumes in Loan Location       Extended Extract Records  RMM
EDGGR11   List MultiVolume and MultiFile  Extended Extract Records  RMM
EDGGR12   Movement Report by Dataset     Extended Extract Records  RMM
EDGGR13   Movement Report by Bin        Extended Extract Records  RMM
EDGGR14   Movement Report by Volume Seri  Extended Extract Records  RMM
  
```

Creating New Reports

```

Panel  Help
-----
                                DFSMSrmm Report Definitions          Row 1 to 15 of 17
Command ==>>                                Scroll ==>> PAGE

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

S Name      Report title          Report type          User id
-----
A EDGGAUD1  SMF Aud |                               | M
  EDGGAUD2  SMF Aud |                               | M
  EDGGR01   Scratch |                               | M
  EDGGR02   List of | Enter the report name . . . . myreport | M
  EDGGR03   Invento |                               | HNB01
  EDGGR04   Invento |                               | M
  EDGGR06   Invento |-----| M
  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
  EDGGR10   Volumes in Loan Location       Extended Extract Records RMM
  EDGGR11   List MultiVolume and MultiFile Extended Extract Records RMM
  EDGGR12   Movement Report by Dataset     Extended Extract Records RMM
  EDGGR13   Movement Report by Bin         Extended Extract Records RMM
  EDGGR14   Movement Report by Volume Seri Extended Extract Records RMM
  
```

Creating New Reports

```

Panel  Help
-----
                                DFSMSRmm Report Definitions                Row 1 to 15 of 17
Command ==>
-----
The following 1 | Panel  Help
-----
                                Select Report Type                Row 1 to 12 of 32
S Name      Repo | Command ==>                                Scroll ==> PAGE
-----
A EDGGAUD1 SMF | S Report type                                Name
EDGGAUD2 SMF | -----
EDGGAUD3 SMF4 | DFSMS DCOLLECT for Data Sets                DCOLLECT
EDGGAUD4 SMF4 | DFSMSShsm ABARS Report                      ARCGWFSR
EDGGDCDS Data | DFSMSShsm DCOLLECT BACKUP                  ARCGDBCK
EDGDSNM Mixe | DFSMSShsm DCOLLECT DASD CAP                ARCGDDSD
EDGREPL Volu | DFSMSShsm DCOLLECT MIGRATION              ARCGDMIG
EDGREPV Volu | DFSMSShsm DCOLLECT TAPE CAP                ARCGDTAP
EDGGR01 Scra | DFSMSShsm FSR-SMF Records                  ARCGFSR2
EDGGR02 List | s Extended Extract Records                EDGRXEXT
EDGGR03 Inve | Extract Records for Bins                    EDGRSEXT
EDGGR04 Inve | Extract Records for Data Sets              EDGRDEXT
EDGGR06 Inve | Extract Records for Owners                 EDGROEXT
EDGGR07 Inve | Extract Records for Products               EDGRPEXT
EDGGR08 Inve | -----
  
```

Creating New Reports

```

Panel  Help
-----
                                DFSMSrmm Report Definitions                Row 1 to 15 of 17
Command ==>
-----
The following 1 | Panel  Help
-----
                                Select Reporting Tool                Row 1 to 2 of 2
S Name      Repo | Command ==>                                Scroll ==> PAGE
-----
A EDGGAUD1 SMF | S Reporting tool
  EDGGAUD2 SMF | -----
  EDGGR01 Scra | s ICETOOL
  EDGGR02 List | SYNCTOOL
  EDGGR03 Inve | ***** Bottom of data *****
  EDGGR04 Inve |
  EDGGR06 Inve |
  EDGGR07 Inve |
  EDGGR08 Inve |
  EDGGR09 Data |
  EDGGR10 Volu |
  EDGGR11 List |
  EDGGR12 Move |
  EDGGR13 Move |
  EDGGR14 Move |
-----

```

Creating New Reports

```

Panel  Help
-----
                DFSMSrmm Report Definition - MYREPORT      Row 1 to 10 of 172
Command ===>                                Scroll ===> PAGE

Report title . . .
Report footer . .
Reporting tool . : ICETOOL                      Report width:    0

Use END to save changes, NOSAVE to ignore
Select a field name with S to specify a field selection criterion

S CO SO  Field name                Column header text                CW  Len Typ
-----
*        RXTYPE                    Record type - C'X'                18   1  C
        XVVOLSER                   Volume serial number              20   6  C
        XVPVOL                     Previous volume in sequence        27   6  C
        XNVVOL                     Next volume in sequence            23   6  C
        XVMDMVID                   Multi-dataset multi-volume id     29   8  C
        XVCRDATE                   Create date of volume record       28  10  C
        XVCRTIME                   Create time volume record (hhmms) 32   6  C
        XVCRSID                    Create system id of volume recor   32   8  C
        XVLCDATE                   Last change date of volume recor   32  10  C
        XVLCTIME                   Last change time of volume recor   32   6  C
  
```


Creating New Reports

Panel Help

DFSMSrmm Report Definitions

Row 1 to 15 of 17

Command ==>

Scroll ==> PAGE

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

S Name	Report title	Report type	User id
EDGGAUD1	SMF Audit of Volumes by Volser	SMF Records for Volumes	RMM
EDGGAUD2	SMF Audit of Volume by Rack	SMF Records for Volumes	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	JOHNB01
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
EDGGR10	Volumes in Loan Location	Extended Extract Records	RMM
EDGGR11	List MultiVolume and MultiFile	Extended Extract Records	RMM
EDGGR12	Movement Report by Dataset	Extended Extract Records	RMM
EDGGR13	Movement Report by Bin	Extended Extract Records	RMM
EDGGR14	Movement Report by Volume Seri	Extended Extract Records	RMM

Creating New Reports

Panel Help

DFSMSrmm Report Definitions

Row 1 to 15 of 18

Command ==>

Scroll ==> PAGE

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

S Name	Report title	Report type	User id
EDGGAUD1			RMM
EDGGAUD2			RMM
EDGGR01		s	RMM
EDGGR02	Enter the report name another	s	RMM
N EDGGR03		s	JOHNB01
EDGGR04		s	RMM
EDGGR06	'-----'	s	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
EDGGR10	Volumes in Loan Location	Extended Extract Records	RMM
EDGGR11	List MultiVolume and MultiFile	Extended Extract Records	RMM
EDGGR12	Movement Report by Dataset	Extended Extract Records	RMM
EDGGR13	Movement Report by Bin	Extended Extract Records	RMM
EDGGR14	Movement Report by Volume Seri	Extended Extract Records	RMM

Creating New Reports

Panel Help

DFSMSrmm Report Definitions

Row 1 to 15 of 19

Command ==>

Scroll ==> PAGE

The following line commands are valid: A,D,G,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	JOHNB01
ARCGAB01	ABARS ABACKUP Statistics	DFSMSHsm ABARS Report	HSM
ARCGAR01	ABARS ARECOVER Statistics	DFSMSHsm ABARS Report	HSM
ARCGDB01	DCOLLECT BACKUP DATA	DFSMSHsm DCOLLECT BACKUP	HSM
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	HSM
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

Creating New Reports

```

Panel  Help
-----
                DFSMSrmm Report Definition - ANOTHER      Row 1 to 10 of 172
Command ==>                               Scroll ==> PAGE

Report title . . . Inventory List by Volume Serial
Report footer . . Removable Media Manager
Reporting tool . : ICETOOL                    Report width:  248

Use END to save changes, NOSAVE to ignore
Select a field name with S to specify a field selection criterion

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             Volsseq                      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
  9      XVLRDDAT             Vol.date last read           18  10   C
 10      XVLWTDAT             Vol.date last write          19  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

Selecting a Reporting Tool

```

Panel  Help
-----
                                DFSMSrmm Report Definitions                Row 1 to 15 of 19
Command ===>                                Scroll ===> PAGE

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

S Name      Report title                                Report type                                User id
-----
 t ANOTHER  Inventory List by Volume Serial Extended Extract Records                JOHNB01
 EDGGAUD1  SMF Audit of Volumes by Volser SMF Records for Volumes                RMM
 EDGGAUD2  SMF Audit of Volume by Rack    SMF Records for Volumes                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 Serial Extended Extract Records                JOHNB01
 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
 EDGGR10   Volumes in Loan Location       Extended Extract Records                RMM
 EDGGR11   List MultiVolume and MultiFile Extended Extract Records                RMM
 EDGGR12   Movement Report by Dataset     Extended Extract Records                RMM
 EDGGR13   Movement Report by Bin        Extended Extract Records                RMM
  
```

Selecting a Reporting Tool

```

Panel  Help
-----
                                DFSMSrmm Report Definitions                Row 1 to 15 of 19
Command == .-----
The follow | Panel  Help |
           |-----|
           |          Select Reporting Tool          Row 1 to 2 of 2 |
S Name     | Command ===> |          Scroll ===> PAGE | id
- - - - - |-----|-----|-----|
T ANOTHER | S Reporting tool | B01
EDGGAUD1  | - - - - - |
EDGGAUD2  | ICETOOL |
EDGGR01   | s SYNCTOOL |
EDGGR02   | ***** Bottom of data ***** |
EDGGR03   | | B01
EDGGR04   |
EDGGR06   |
EDGGR07   |
EDGGR08   |
EDGGR09   |
EDGGR10   |
EDGGR11   |
EDGGR12   |
EDGGR13   |-----|

```

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

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 2 of 2
Command ===>                                                                Scroll ===> PAGE

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

S Reporting tool                    Exec      Skeleton Colspace Group sort
-----
c ICETOOL                            EDGRGEN EDGSGICE          3          U
  SYNCTOOL                            EDGRGEN EDGSGSYN          3          U
***** Bottom of data *****

```

Selecting a Reporting Tool

```

Panel  Help
-----
                                DFSMSrmm Reporting Tools                Row 1 to 2 of 2
Command ===>                                Scroll ===> PAGE

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

S Reporting tool                Exec      Skeleton Colspace Group sort
- - - - -
.
C ICETOOL                        |                Change a Reporting Tool
  SYNCTOOL                       |
*****                            |
| Reporting tool . : ICETOOL
| Exec . . . . . EDGRGGEN
| Skeleton . . . . . EDGSGICE
| Colspace . . . . . 1
| Group sort . . . . U
|
-----

```

Using Titles, Headers and Footers

- 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 10 of 172
Command ===>                                Scroll ===> PAGE

Report title . . . Another Inventory List by Volume Serial
Report footer . . With Shorter Column Headers
Reporting tool . : SYNCTOOL                      Report width: 199

Use END to save changes, NOSAVE to ignore
Select a field name with S to specify a field selection criterion

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                   12  10  C
  9      XVLRDDAT             Read Date                     10  10  C
 10     XVLWTDAT              Write Date                     10  10  C
  
```

Selection Criteria, Sorting and Grouping

- 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 overtyped 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 overtyped 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 10 of 172
Command ==>                                Scroll ==> PAGE

Report title . . . Another Inventory List by Volume Serial
Report footer . . With Shorter Column Headers
Reporting tool . : SYNCTOOL                    Report width: 199

Use END to save changes, NOSAVE to ignore
Select a field name with S to specify a field selection criterion

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  XDDSSEQ                    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                        12  10  C
  9      XVLRDDAT                    Read Date                          10  10  C
 10      XVLWTDAT                    Write Date                         10  10  C
  
```



Selection Criteria, Sorting and Grouping

```

Panel  Help
-----
                DFSMSrmm Report Definition - ANOTHER          Row 1 to 10 of 172
Command ===>                                Scroll ===> PAGE

Report title . . . Another Inventory List by Volume Serial
Report footer . . With Shorter Column Headers
Reporting tool . : SYNCTOOL                      Report width: 199

Use END to save changes, NOSAVE to ignore
Select a field name with S to specify a field selection criterion

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                12  10   C
  4      XVVOLSEQ           Volsseq                     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
  9      XVLRDDAT           Read Date                    10  10  C
 10     XVLWTDAT           Write Date                   10  10  C
  
```

Fields
Pushed down

Selection Criteria, Sorting and Grouping

```

Panel  Help
-----
                DFSMSrmm Report Definition - ANOTHER    Row 11 to 20 of 172
Command ===>                                Scroll ===> PAGE

Report title . . . Another Inventory List by Volume Serial
Report footer . . With Shorter Column Headers
Reporting tool . : SYNCTOOL                    Report width: 199

Use END to save changes, NOSAVE to ignore
Select a field name with S to specify a field selection criterion

S CO SO  Field name                Column header text                CW  Len Typ
-----
  11    XVLABEL                    Lbl                               3   3   C
  12    XVMEDREC                   Rec Fmt                           8   8   C
* 13    XVSTATUS                   Volstat                            8   8   C
  14    XVVRS                      VRS?                               4   1   C
  * 15    XVSTORID                  Location                           8   8   C
  16    RXTYPE                     Record type - C'X'                18   1   C
  17    XVPVOL                     Previous volume in sequence        27   6   C
  18    XNVVOL                     Next volume in sequence           23   6   C
  19    XVMDMVID                   Multi-dataset multi-volume id     29   8   C
  20    XVCRDATE                   Create date of volume record       28  10   C
  
```


Selection Criteria, Sorting and Grouping

```

Panel  Help
-----
                DFSMSrmm Report Definition - ANOTHER        Row 1 to 10 of 172
Command ==>                                Scroll ==> PAGE

Report title . . . Another Inventory List by Volume Serial
Report footer . . With Shorter Column Headers
Reporting tool . : SYNCTOOL                        Report width: 188

Use END to save changes, NOSAVE to ignore
Select a field name with S to specify a field selection criterion

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                          12  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
  8      XDCRTIME                      Create Time                          11   6   C
  9      XVLRDDAT                      Read Date                            10  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

Use END to save changes, NOSAVE to ignore

The following line commands are valid: B,D,N,P,R,T, and I (for details)

Comparison operators: EQ =, NE <>, GT >, GE >=, LT <, LE <=, IN, BW, SE, SN

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 *****

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

Use END to save changes, NOSAVE to ignore

Th .-----
Co |                DFSMSrmm Report Criteria Details - ANOTHER
Co |
|
S | Field name . . . . : XDDSNAME
- | Operation . . . . . EQ
  | Compare value(s) . . OFFSITE
  | Compare value(s) . .
  | Conjunction . . . . . AND
I | Substring position   6
**| Substring length . . 7
  | Orig field length   : 44
  | Type . . . . . : C
|
-----

```

Selection Criteria, Sorting and Grouping

```

Panel H .-----
-----| HELP ----- Operator (3) ----- HELP
Command ==|                                     More: +
        | Op   Use this data column to specify the logical operator
Report tit| -(3)- for the comparison of the field name with the compare
        | GE   values(s).
Use END to|
Th .-----| Possible values:
Co |           EQ or = - Equal
Co |           NE or <> - Not equal
   |           GT or > - Greater than
S | Field | GE or > - Greater than or equal
- | Opera | LT or < - Less than
  | Compa | LE or < - Less than or equal to
  | Compa | IN      - In (Specify a list of possible values,
  | Conju |         separated by a comma)
I | Subst | BW      - Between (Specify two inclusive values,
**| Subst |         separated by a comma)
  | Orig  | SE      - Substring Equal (the compare value is
  | Type  |         anywhere in the field)
   |           SN      - Substring Not equal (the compare value
   |           is nowhere in the field)
-----|-----

```

Selection Criteria, Sorting and Grouping

- 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 Criteria - ANOTHER                Row 1 to 4 of 4
Command ==>                                         Scroll ==> PAGE

Report title : Another Inventory List by Volume Serial

Use END to save changes, NOSAVE to ignore
The following line commands are valid: B,D,N,P,R,T, and I (for details)
Comparison operators: EQ =, NE <>, GT >, GE >=, LT <, LE <=, IN, BW, SE, SN
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
XDDSNAME              EQ OFFSITE                            AND    OVR C
***** Bottom of data *****

```

Selection Criteria, Sorting and Grouping

```

Panel  Help
-----
                DFSMSrmm Report Definition - ANOTHER      Row 1 to 10 of 172
Command ===>                                Scroll ===> PAGE

Report title . . . Another Inventory List by Volume Serial
Report footer . . With Shorter Column Headers
Reporting tool . : SYNCTOOL                      Report width: 188

Use END to save changes, NOSAVE to ignore
Select a field name with S to specify a field selection criterion

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      XDDSNNAME         Dataset Name                    44  44  C
  3      XVEXPDT              Expire Date                      12  10  C
  4      XVVOLSEQ             Valseq                           6   4  C
  5  3A  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
  9      XVLRRDAT             Read Date                         10  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
- If you are generating an HSM Report from FSR records you'll have to specify your input dataset and the SMF record number in hex
- 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 19

Command ==>

Scroll ==> PAGE

The following line commands are valid: A,D,G,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	JOHNB01
EDGGAUD1	SMF Audit of Volumes by Volser	SMF Records for Volumes	RMM
EDGGAUD2	SMF Audit of Volume by Rack	SMF Records for Volumes	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	JOHNB01
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
EDGGR10	Volumes in Loan Location	Extended Extract Records	RMM
EDGGR11	List MultiVolume and MultiFile	Extended Extract Records	RMM
EDGGR12	Movement Report by Dataset	Extended Extract Records	RMM
EDGGR13	Movement Report by Bin	Extended Extract Records	RMM

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 'JOHNB01.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, if an extract step is included:

Skeleton Variable_1 . . DATEFORM(J)

Skeleton Variable_2 . . 'JOHNB01.RMMHSP.MESSAGE'

Skeleton Variable_3 . .

The skeleton selection depends on the reporting macro . . . : EDGRXEXT

Enter END command to start the report generation, or NOGEN to cancel

presented on slides 21 and 22

The Generated Report JCL

```

Panel  Help
-----
                                DFSMSrmm Report Definitions                Row 1 to 15 of 19
Command ===>                                Scroll ===> PAGE

The following line commands are valid: A,D,G,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                JOHNBO1
EDGGAUD1   SMF Audit of Volumes by Volser SMF Records for Volumes                RMM
EDGGAUD2   SMF Audit of Volume by Rack     SMF Records for Volumes                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                JOHNBO1
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
EDGGR10    .------.                                RMM
EDGGR11    | Report JCL ANOTHER stored on 'JOHNB01.REPORT.JCL' | RMM
EDGGR12    '-----'                                RMM
EDGGR13    Movement Report by Bin          Extended Extract Records                RMM

```

The Generated Report JCL

Including an extract

```

File  Edit  Edit_Settings  Menu  Utilities  Compilers  Test  Help
-----
EDIT          JOHNB01.REPORT.JCL(ANOTHER) - 01.01          Columns 00001 00072
Command ==>                               Scroll ==> PAGE
***** Top of Data *****
000001 //RPTGEN01 JOB ( ), 'RMM RPT GEN', CLASS=A, MSGCLASS=H, MSGLEVEL=(1,1),
000002 //          REGION=0M, NOTIFY=&SYSUID
000003 //*
000004 //*
000005 //*****
000006 //**      SKELETON MEMBER EDGSGSYN
000007 //**      TAILORED BY THE RMM REPORT GENERATOR
000008 //*****
000009 //STEP01 EXEC PGM=EDGHSKP, PARM='RPTEXT, DATEFORM(J)'
000010 //SYSPRINT DD SYSOUT=*
000011 //MESSAGE DD DSN=JOHNB01.RMMHSKP.MESSAGE,
000012 //          DISP=SHR
000013 //XREPTEXT DD DSN=JOHNB01.RMM.EXTRACT,
000014 //          DISP=SHR
000015 //*****
000016 //**      DATE CALCULATION STEP
000017 //**      COMPARE VALUES CONTAINING ARE CALCULATED BASED ON RUN DATE
000018 //*****
000019 //DATECONV EXEC PGM=IKJEFT01, PARM='%EDGRGDAT'

```

The Generated Report JCL

Selection Criteria

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
-----
EDIT          JOHNBO1.REPORT.JCL(ANOTHER) - 01.01          Columns 00001 00072
Command ==>                                           Scroll ==> PAGE
000020 //SYSPROC DD DISP=SHR,DSN=SYS1.SEDGEXE1
000021 //SYSTSPRT DD SYSOUT=*
000022 //DATEFMT DD *
000023 DATE PATTERN:YYYY/DDD
000024 //INCLIN DD *
000025 OPTION VLSHRT,VLSCMP
000026 INCLUDE COND=(( 5,1,CH,EQ,C'X' ),
000027             AND,
000028             ( 322,8,CH,EQ,C'MASTER' ),
000029             AND,
000030             (( 9,6,CH,GE,C'000000' ),
000031             AND,
000032             ( 9,6,CH,LE,C'299999' ),
000033             AND,
000034             ( 814,7,CH,EQ,C'OFFSITE' ))
000035 INREC FIELDS=(1,4,
000036             156,8,C' ',
000037             9,6,C' ',
000038             809,44,C' ',
000039             119,10,C' ',
```

Tips and 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 and 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

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

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Tips and Tricks

Panel Help

DFSMSrmm Report Types

Row 1 to 3 of 17

Command ==>

Scroll ==> PAGE

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

S Name Description

a EDGRXEXT Extended Extract Records
Macro library . . : 'SYS1.MACLIB'
Applicable macros : EDGRXEXT
Input data set. . : 'RMM.EXTRACT'

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'

Tips and Tricks

```

Panel  Help
-----
                                DFSMSrmm Report Types                                Row 1 to 3 of 17
Command ==>>                                                                Scroll ==>> PAGE

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

S Name      Description
-----
A ED |
      |                               Add a Report Type
      |
      | Report type name . . . PAYREC
---- | Description . . . . . Map Payroll Records
ED  | Macro library . . . . 'TECH.MACLIB'
      | Applicable macros . . . PAYRMAP
      | RDW in 1st macro . . . N (Y/N)
      | Input data set . . . 'PAYROLL.RECORDS'
---- |
ED  |

Applicable macros : EDGRDEXT
Input data set. . : 'RMM.EXTRACT'
-----

```

Tips and Tricks

```

Panel  Help
-----
                                DFSMSrmm Report Types                                Row 1 to 3 of 17
Command ===>                                                                Scroll ===> PAGE

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

S Name      Description
-----
|
|                                Add a Report Type
| Command ===>
|
| Report type name . . . PAYREC
| Description . . . . . Map Payroll Records
| Macro library . . . . 'TECH.MACLIB'
| Applicable macros: Macro      Keywords (LEFT / RIGHT to scroll or EXPAND)
|                   . . . . . PAYRMAP  DSECT=NO                                +
|                   . . . . .                                     +
|                   . . . . .                                     +
|                   . . . . .                                     +
|                   . . . . .                                     +
| RDW in 1st macro . . . N  (Y/N)
| Input data set . . . . 'PAYROLL.RECORDS'
|
-----

```

Tips and Tricks

- 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 and 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

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

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Tips and Tricks

Panel Help

DFSMSrmm Reporting Tools Row 1 to 2 of 2
Command ==> Scroll ==> PAGE

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

S	Reporting tool	Exec	Skeleton	Colspace	Group	sort
-	-----	-----	-----	-----	-----	-----
a	ICETOOL	EDGRGGEN	EDSGICE	3		U
	SYNCTOOL	EDGRGGEN	EDSGSYN	3		U

***** Bottom of data *****

Tips and Tricks

Panel Help

```

-----
                                DFSMSrmm Reporting Tools                Row 1 to 2 of 2
Command ==>                               Scroll ==> PAGE
  
```

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

```

S Reporting tool           Exec      Skeleton Colspace Group sort
  
```

```

-----
A ICETOOL
  SYNCTOOL
*****
  
```

```

                                Add a Reporting Tool
  
```

```

Reporting tool . . SASTOOL
Exec . . . . . EDGRGSAS
Skeleton . . . . . EDGSGSAS
Colspace . . . . . 3
Group sort . . . . M
  
```

```

*****
  
```

Tips and Tricks

- 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

z/OS V1.10 Changes

- RMM Changes
 - Support Macro Keywords
 - Limit the fields processed
 - New line commands 'M' and 'L' to view Macros and Listings
 - Support Multiple Macro Libraries
 - Supports ARCG* SAMPLIB members
 - ISPF Skeleton supports DCOLLECT
- HSM Changes
 - Generate reports of DFSMSHsm functions and inventory using DFSMSrmm Report Generator
 - New FSR and WFSR records for reporting
 - FSR/WFSR SMF records reformatted prior to reporting
 - New Samples Shipped
 - Report Types
 - Reports for:
 - *ABARS, DCOLLECT, HSM Stats*
- ISMF Change
 - New Selection option for
 - *G Report Generation - Create Storage Management Reports*

z/OS V1.10 Changes

- Reporting Records
 - **ARCFSR** (SYS1.MACLIB)
 - FSR for DFSMSHsm in SMF form
 - Converted inline to **ARCFSR2** by ARCGFSRC
 - **ARCWWFSR** (SYS1.MACLIB)
 - WWFSR for ABARS in SMF form
 - Converted inline to **ARCWWFSR2** by ARCGWFSC
 - **ARCUTILP** (SYS1.MACLIB)
 - Modified with keywords to map each structure
 - TYPE=ALL | M | B | C | T
 - ALL for all structures
 - M for Migrate
 - B for Backup
 - C for DASD Capacity Planning
 - T for Tape Capacity Planning
- ARCGFSRC & ARCGWFSC are shipped in SYS1.DGTSLIB

z/OS V1.10 Changes

Report Types

Name	Description
ARCGWFSR	ABARS
ARCGDBCK	DCOLLECT BACKUP
ARCGDDSD	DCOLLECT DASD CAPACITY
ARCGDMIG	DCOLLECT MIGRATION
ARCGDTAP	DCOLLECT TAPE CAPACITY
ARCGFSR2	DFSMSHsm Functions

z/OS V1.10 Changes

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

z/OS V1.10 ABACKUP Sample Report

• **ABARS ABACKUP Statistics** - 2 - 2007/07/29 10:52:02

• **AG NAME AGGRP2**

DATE	TIME	USERID	C FILE DSN	# TAPE	Host
2007170	10313880	HSMATH0	DFHSM.ABARS.C.C01V0002	4	1
2007171	10304527	HSMATH0	DFHSM.ABARS.C.C01V0003	4	1
2007172	10300561	HSMATH0	DFHSM.ABARS.C.C01V0004	4	1
GROUP TOTALS:				12	

• **AG NAME AGGRP3**

DATE	TIME	USERID	C FILE DSN	# TAPE	Host
2007171	10313880	HSMATH0	DFHSM.ABARS.C.C01V0003	4	1
GROUP TOTALS:				4	

Other fields included in the sample report:

- Number and K-Bytes of Level-0 data sets
- Number and K-Bytes of Migrated data sets
- Number of Accompany data sets
- Total K-Bytes
- CPU Time
- Return Code / Reason Code

z/OS V1.10 Tape Capacity Report

DCOLLECT TAPE CAPACITY PLANNING - 1 - 2007/07/29

TYPE TAPE B

# FULL TAPE	# PARTIAL	# EMPTY
184	46	16
0	0	0
GROUP TOTALS:		
184	46	16

TYPE TAPE D

# FULL TAPE	# PARTIAL	# EMPTY
1858	0	6
0	0	0
GROUP TOTALS:		
1858	0	6

TYPE TAPE M

# FULL TAPE	# PARTIAL	# EMPTY
103	36	0
0	0	0
0	0	0
GROUP TOTALS:		
103	36	0

# FULL TAPE	# PARTIAL	# EMPTY
00	2145	82
		22

z/OS V1.10 Migration Data Sample Report

DCOLLECT MIGRATION DATA

- 1 -

2007/07/29

MIG DATE	MIG TIME	DSN	1ST SRC VOL
2007158	14250634	HSMATH0.SMS.VBGPS1	SMS001
2007158	14250646	HSMATH0.SMS.VSMALNA	SMS001
2007158	14250661	HSMATH0.SMS.VSMALNB	SMS001
2007158	14250674	HSMATH0.SMS.VSMALNC	SMS001
2007158	14250686	HSMATH0.SMS.VSMALND	SMS001
2007158	14250698	HSMATH0.SMS.VSMALNE	SMS001
2007158	14250709	HSMATH0.SMS.VSMALNF	SMS001
2007158	14250718	HSMATH0.SMS.VSMALNG	SMS001
2007158	14250732	HSMATH0.SMS.VSMALNH	SMS001
2007158	14250742	HSMATH0.SMS.VSMALNI	SMS001
2007158	14250758	HSMATH0.SMS1.PS.TEST0	SMS001
2007158	14250751	HSMATH0.SMS1.PS.TEST1	SMS001
2007158	14250766	HSMATH0.SMS2.PS.TEST2	SMS001
2007158	14250776	HSMATH0.SMS3.PS.TEST3	SMS001
2007158	14250783	HSMATH0.SMS4.PS.TEST4	SMS001

Other fields included in the sample report:

- K-Bytes of Original data set and Migration copy
- Expiration date
- SMS Class names

z/OS V1.10 Backup Sample Report

Statistics for Backup

- 1 -

2007/07/29

11:41:00

DATE	TIME REQ	TIME COMP	DSN	SOURCE	TARGET
2007158	14145274	14145347	HSMATH0.SMS.VBGPS1	SMS001	MIG101
2007158	14171032	14171808	HSMATH0.SMS.VBGPS1	SMS001	.....
2007158	14144720	14144744	HSMATH0.SMS.VSMALNA	SMS001	MIG101
2007158	14145008	14145023	HSMATH0.SMS.VSMALNA	SMS001	MIG101
2007158	14170596	14170994	HSMATH0.SMS.VSMALNA	SMS001	.....
2007158	14170970	14170998	HSMATH0.SMS.VSMALNB	SMS001	.....
2007158	14170989	14171003	HSMATH0.SMS.VSMALNC	SMS001	.....
2007158	14170995	14171010	HSMATH0.SMS.VSMALND	SMS001	.....
2007158	14171001	14171016	HSMATH0.SMS.VSMALNE	SMS001	.....
2007158	14171007	14171023	HSMATH0.SMS.VSMALNF	SMS001	.....
2007158	14171012	14171030	HSMATH0.SMS.VSMALNG	SMS001	.....
2007158	14171019	14171036	HSMATH0.SMS.VSMALNH	SMS001	.....
2007158	14145814	14145827	HSMATH0.SMS.VSMALNI	SMS001	MIG101
2007158	14171026	14171045	HSMATH0.SMS.VSMALNI	SMS001	.....

Other fields included in the sample report:

- Number of tapes
- Number of K-Bytes read and written
- SMS Class names
- Return Code / Reason Code

z/OS V1.10 FRBACKUP Sample Report

Statistics for FRBACKUP

- 1 -

2007/07/29

12:14:52

CP NAME COPYPL1

DATE	TIME REQ	TIME COMP	SOURCE	TARGET	RC	REAS	HOSTID
2007198	16124594	16124610	SRC001	TAR001	00000000	00000000	1
2007198	16124594	16124621	SRC002	TAR002	00000000	00000000	1
2007198	16124594	16124633	SRC003	TAR003	00000000	00000000	1
2007198	16124861	16124876	SRC001	TAR004	00000000	00000000	1
2007198	16124861	16124886	SRC002	TAR005	00000000	00000000	1
2007198	16124861	16124896	SRC003	TAR006	00000000	00000000	1
2007199	14070930	14071046	SRC003	TAR003	00000000	00000000	1
2007199	14070930	14071094	SRC001	TAR001	00000000	00000000	1
2007199	14070930	14071096	SRC002	TAR002	00000000	00000000	1
2007199	14072157	14072230	SRC001	TAR004	00000000	00000000	1
2007199	14072157	14072230	SRC002	TAR005	00000000	00000000	1
2007199	14072157	14072231	SRC003	TAR006	00000000	00000000	1

z/OS V1.10 Thrashing Sample Report

Migration Age of zero when data set is recalled

DFSMSHsm Thrashing Report

- 1 -

2008/02/04

15:06:18

DSN	AGE	SIZE KB	MC NAME
HSMATH0.SMS.VBGPS1	0000	36830	MCLASS1
HSMATH0.SMS.VSMALNA	0000	159	MCLASS1
HSMATH0.SMS.VSMALNB	0000	159	MCLASS1
HSMATH0.SMS.VSMALNC	0000	159	MCLASS1
HSMATH0.SMS.VSMALND	0000	159	MCLASS1
HSMATH0.SMS.VSMALNE	0000	159	MCLASS1
HSMATH0.SMS.VSMALNF	0000	159	MCLASS1
HSMATH0.SMS.VSMALNG	0000	159	MCLASS1
HSMATH0.SMS.VSMALNH	0000	159	MCLASS1
HSMATH0.SMS.VSMALNI	0000	159	MCLASS1
HSMATH0.SMS1.PS.TEST0	0000	3	MCLASS1
HSMATH0.SMS1.PS.TEST1	0000	3	MCLASS1
HSMATH0.SMS2.PS.TEST2	0000	3	MCLASS1

Other fields included in the sample report:

- Date; Elapsed time
- Target volume
- Return Code / Reason Code

z/OS V1.11 Changes

- RMM Changes
 - Report Migration tasks
 - Creating a Dataset instead of a report
 - Report type inheritance
 - Report Totals now can exclude fields
 - List of possible values for fields
 - Use Substrings for field selection
 - Include the date and time the RMM Report Extract was created in the report(s)
 - Use Assembler equates for field selection comparisons
 - Override default ICETOOL processing
 - Improved generated JCL with HELP information
 - Reformat records with DFSORT
 - Reporting Tool REXX variables have been updated
 - Updated RMM mapping macros

z/OS V1.12 Changes

- RMM Changes
 - Additional Report Definitions now available
 - VRSRETN
 - VRSRETNS
 - EXPDROP
 - EXPDROPS
 - Copy Exported Reports
 - Additional Sample Reporting jobs in SYS1.SAMPLIB & SYS1.SEDGEXE1
 - Updated RMM mapping macros
 - EDGACXSX combined Activity/Extended Extract record symbol mapping
 - EDGACTSY Activity file symbols
 - EDGEXTSY Extract data set symbols
 - EDGSRCSY SMF record symbols

Collecting Data

- DCOLLECT

```
//DCOLLECT JOB
//*
//STEP1 EXEC PGM=IDCAMS
//OUTDS DD DSN=DFHSM.DCOLLECT.DATA,DISP=(NEW,CATLG),
//      UNIT=SYSALLDA,SPACE=(CYL,(50,2)),
//      DCB=(LRECL=644,BLKSIZE=0,RECFM=VB),
//      AVGREC=K
//SYSPRINT DD SYSOUT=A
//MCDS DD DSN=DFHSM.MCDS,DISP=SHR
//BCDS DD DSN=DFHSM.BCDS,DISP=SHR
//SYSIN DD *
DCOLLECT -
OUTFILE(OUTDS) -
MIGRATEDATA -
BACKUPDATA -
CAPD
```

Collecting Data

- SMF

```
//SMFDUMP JOB
//*
//DUMPSMF EXEC PGM=IFASMFDP,REGION=512K
//INDD0 DD DSN=SYS1.MAN1,DISP=SHR
//INDD1 DD DSN=SYS1.MAN2,DISP=SHR
//DUMPOUT DD DSN=HLQ.SMFREC.HSM,DISP=(,CATLG,DELETE),
//      SPACE=(CYL,(100,50),RLSE)
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
INDD(INDD0,OPTIONS(DUMP))
INDD(INDD1,OPTIONS(DUMP))
OUTDD(DUMPOUT,TYPE(240))
```

Collecting Data

- RMM REPORT EXTRACT

```
//RPTEXT JOB
```

```
//*
```

```
//EXTRACT EXEC PGM=EDGHSKP,PARM='RPTEXT,DATEFORM(A)'
```

```
//MESSAGE DD DISP=SHR,DSN=RMM.MESSAGE.DSN
```

```
//XREPTEXT DD DISP=SHR,DSN=RMM.REPORT.CDS.EXTRACT
```

```
//SYSIN DD *
```

```
RPTEXT RECORDS(X)
```

Reference Material

- RMM

DFSMSrmm Reporting

SC26-7406-09

Chapter 2

- HSM

DFSMSHsm Storage Administration

SC35-0421-11

Chapter 14 Page 589

DFSMSHsm Diagnosis

GC52-1083-06

Chapter 11

DFSMSHsm Data Areas

n/a

<http://publibz.boulder.ibm.com/zoslib/pdf/hsmr12da.pdf>

- DCOLLECT

DFSMS Access Method Services for Catalogs

SC26-7394-11

Chapter 11

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/