

What's new in OMEGAMON XE for Storage v4.2.0 Latest Interim Feature

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SHARE in Boston

OMEGAMON XE for Storage

Agenda



- Interim *new* Features ‘freebies’
- Base Product
 - New features
- IF0001
 - New features
- IF0002
 - New Features
- What’s next
- Data Collection (?)

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Release History

New Releases can take **2 years** to be available
Interim Features are approximately every 6 – 9 months.

- V4.1.0 GA 4Q 2006
- V4.2.0 GA 4Q 2008 2 years
 - IF1 July 17th 2009 7 months
 - IF2 December 2009 5 months
 - IF3 next # months
- Interim Features are cumulative

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Release History



Interim Features are installed with a PTF

Distributed Interim Fixes may be required

Platform maintenance table

<http://www-01.ibm.com/support/docview.wss?rs=203&uid=swg27008514>

OMEGAMON XE for Storage

Version 420 Features



- **BASE Product**
 - Storage Toolkit enhanced IDCAMS
 - New BATCH JCL capabilities
 - New COMMAND capabilities
 - DFSMSrmm support
 - EAV support
 - Tivoli Common Support
 - Dynamic workspace links to TEP children
 - Currency new z/OS features
 - Security enhanced for userid of TEP user

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Version 420 Features



- **BASE Product**
- Storage Toolkit improvements
 - DFHSM
 - DFDSS
 - IDCAMS
 - RMM subcommands

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Version 420 Features



Tivoli Enterprise Portal Welcome SYSADMIN Log out IBM

File Edit View Help

Navigator View: Physical

- Tape Group
- Virtual Tape
- SMS Storage
- SMS Storage
- User DASD
- User DASD
- DFSMSshm
- DFSMSrmm
- Dataset Attr
- Dataset Group
- SMS Config
- Storage Tool

Physical

Dataset Space Summary Report

Dataset Name		
SYS1.VTOC.VBLD005		
SYS1.VTOCIX.VBLD005		
DSBLD.L358170X.CLINKOB		
SYS1.VVDS.VBLD005		
DSBLD.L356064X.AJPN		
DSBLD.DS360CRC.DATV	2	1
DSBLD.CTV400.CSRC	1	0
DSBLD.L356330X.ZIPS	599	0
DSBLD.L355209X.KPD.A	1	1

Volume Space Allocation

Total Capacity: 2707 megabytes

Legend: Free Space Megabytes (yellow), Allocated Space MegaBytes (blue)

Page: 1 of 3

Dataset Type	Logical Record Length	Block Size
Physical Sequential	0	0
Physical Sequential	2048	2048
B Extended	80	3200
AM	0	4096
B Extended	6160	8900
tioned	6160	8900
B Extended	255	8900
B Extended	255	8900
Physical Sequential	4080	4080

Dataset Actions...

- Backup
- Migrate
- Move & Copy
- Recall
- Recover
- Release Space
- Compress
- Print
- Allocate
- Rename
- Alter
- Delete
- Listcat
- Repro
- Verify
- Catalog
- Uncatalog
- Define Cluster

Hub Time: Wed, 11/05/2008 02:29 PM Server Available Dataset Space Summary - omstgbv1.raleigh.ibm.com - SYSADMIN

Applet CMWApplet started Local intranet

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- BATCH JCL

Mainframe fully qualified dataset containing the batch JCL:

'DAULT.MVS.JCL(IDCAMS)' [Edit JCL](#)

Substitution variables and their run-time replacement values

Variable	Attribute or String
ITMVAR1	Dataset Name

Files whose contents should be copied for later viewing

Step name	Fully Qualified Dataset or DD name
-----------	------------------------------------

Fully Qualified Datasets needed by the job that also contain substitution variables

[Show Data](#)

OK Cancel Help

Dataset Space Summary Report

Dataset Name	Logical Record Length	Block Size
CICSTS.V3R1.CICSTIV2.DFHAUXT	4096	4096
CICSTS.V3R1.CICSTIV2.DFHMPB	4092	4096
CICSTS.V3R1.CICSTIV2.DFHEJOS.DAT	8185	8192
CICSTS.V3R1.CICSTIV2.DFHEJOS.INDE	1017	1024
CICSTS.V3R1.CICSTOR1.DFHHTML	80	27920
CICSTS.V3R1.CNTL.CICSAOR6.DFHTE	4089	4096
CICSTS.V3R1.CPSM.SEYULOAD	0	32760
CICSTS.V3R1.CPSM.SEYUPLIB	80	27920
CICSTS.V3R1.CPSMCMAS.DFHAUXT	4096	4096
CICSTS.V3R1.CPSMCMAS.DFHGCD.DA	4089	8192
CICSTS.V3R1.CPSMCMAS.DFHGCD.INI	1529	1536
CICSTS.V3R1.CPSMCMAS.DFHHTML	80	27920
CICSTS.V3R1.REXX.SCICBOOK	4096	24576
CICSVR.V4R1.CUSTOMER.D	80	512
CICSVR.V4R1.CUSTOMER.I	2041	2048
CICSVR.V4R1.SDWWJRNL	5996	6000
CMOD.V7R1M1.INSTALL	80	8800
CMOD.V7R1M1.SAPKSAM2	80	27920
COMMON.SA390.NDC.ACF.BKP	80	8160
DATAHUB.V1R2M0.SEMQMSAM	80	8800
DATAREF.V1R1M0.DVRINTAB	100	6100
DAULT.HCD.MSGLOG	133	1330

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- BATCH JCL

A screenshot of a Windows-style edit window titled "Edit - 'DDS1438.MVS.CNTL(IDCAMS)'". The window contains the following JCL code:

```
//DDS1438 JOB (ACCT), 'PROGRAMMER-NAME', CLASS=A, MSGCLASS=X, REGION=0M  
//*  
//PRINT EXEC PGM=IDCAMS, REGION=4M  
//SYSPRINT DD SYSOUT=*  
//SYSIN DD *  
PRINT IDS(%DSN%) CHAR
```

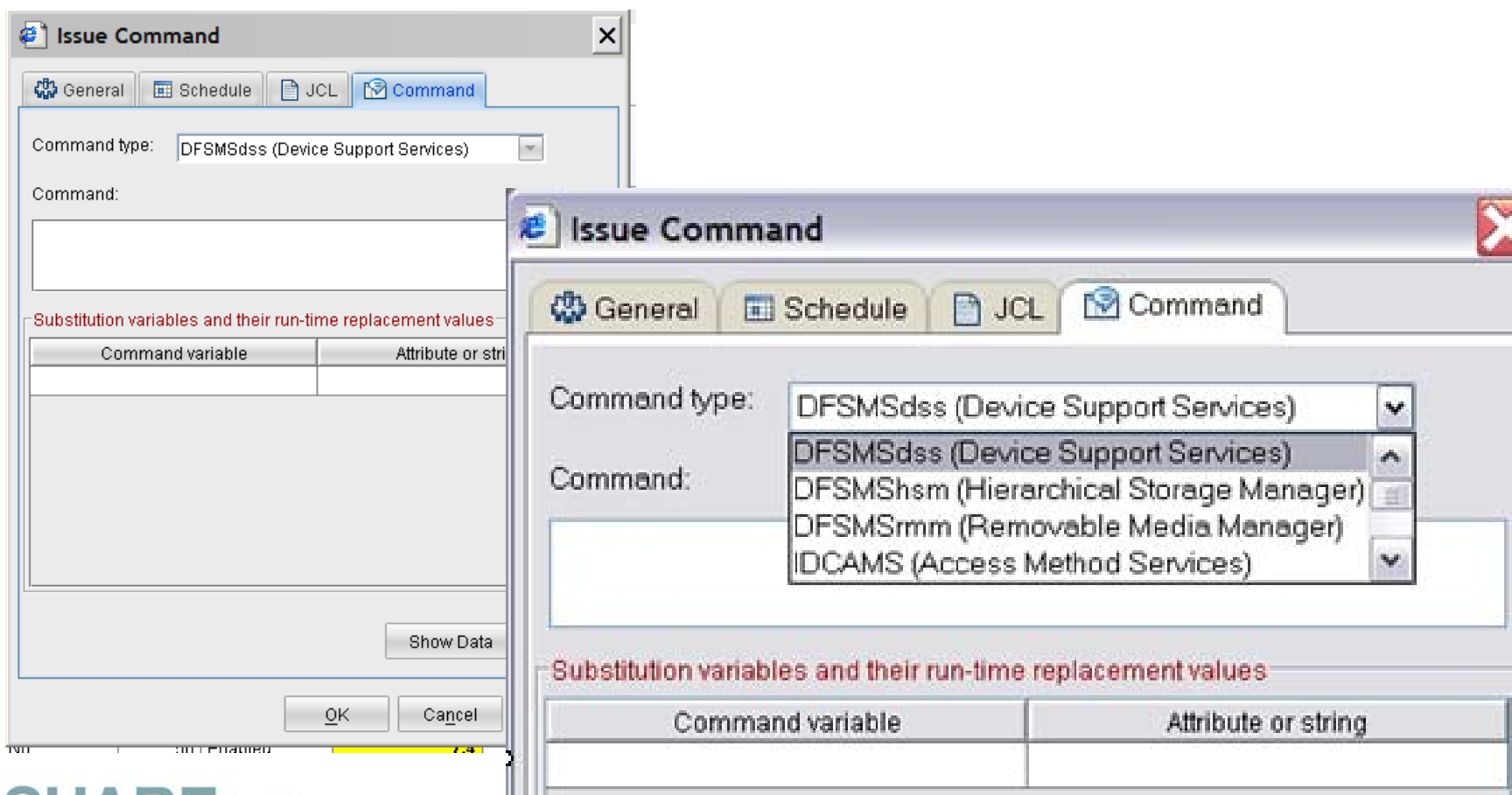
The status bar at the bottom of the window shows "REP" on the left, "LINE 6" and "COL 23" in the middle, and three buttons labeled "OK", "Cancel", and "Help" on the right.

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Version 420 Features



Commands built with Storage toolkit



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- DFSMSrmm support

Several new workspaces were created to present information from your RMM CDS.

CDS and Journal utilization

Volumes

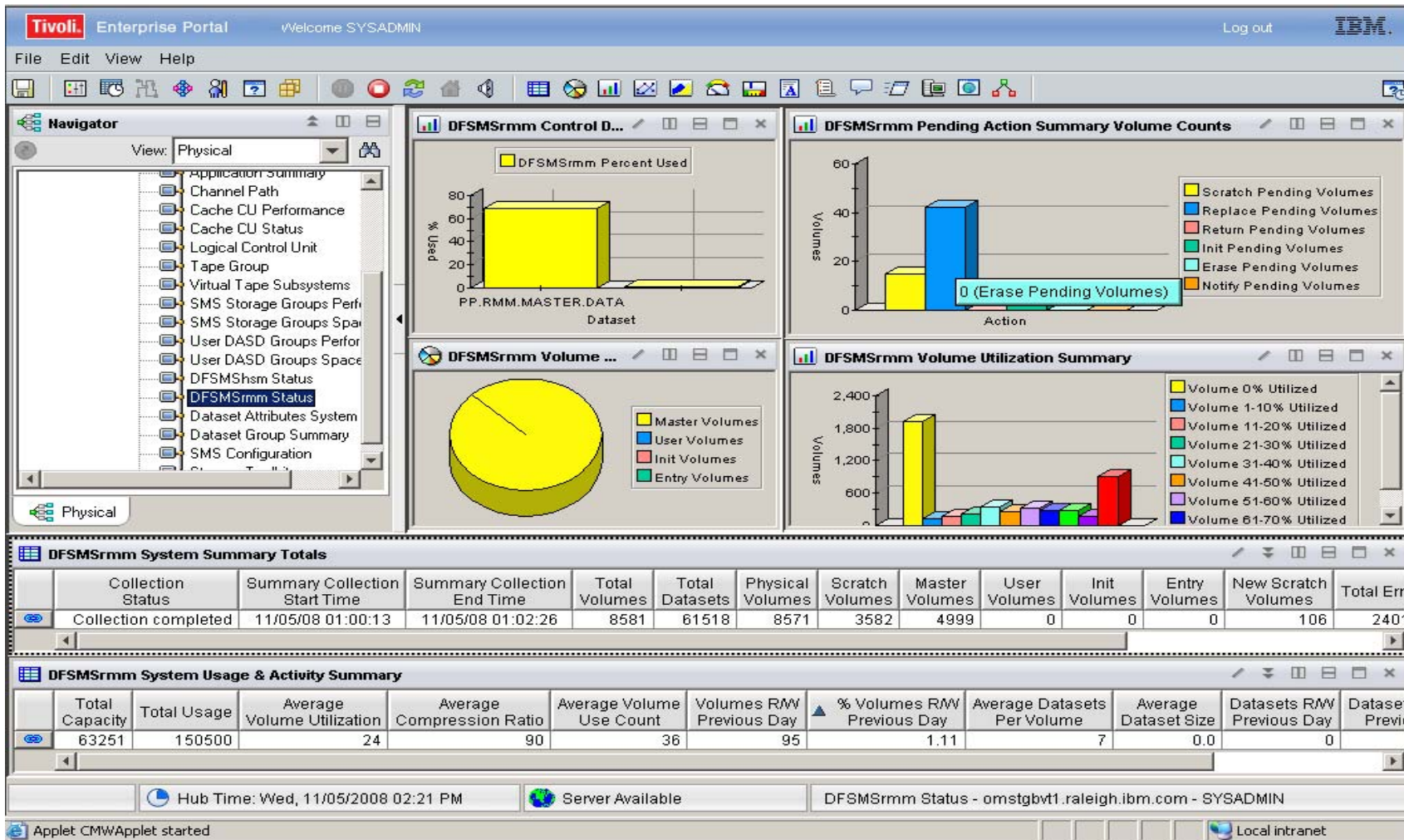
Datasets

Owners

Reports by Utilization, Status, Pending Action, Accounting, Jobname, Program, Location and VRS definitions

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Currency

DS8000 support
TS7700 support
EAV support

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Tivoli Common Reporting

Summarized Reports

Storage HSM Migrate and Recall Function Requests

Storage system Volume and Dataset DASD Usage

Storage Dataset Group DASD Usage

http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr_cog.doc/tcr_welcome.html

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Dynamic workspace linking between TEP enabled products

OMEGAMON XE for Storage on z/OS

IBM Tivoli Advanced Audit for DFSMSHsm

IBM Tivoli Advanced Reporting for DFSMSHsm

IBM Tivoli Advanced Catalog Management

IBM Tivoli Advanced Allocation Management

IBM Tivoli Tape Optimizer

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Interim Feature ?



How to determine which IF version you're using

Navigator Item: Enterprise

Workspace: Managed System Status

Attributes: Product S3 Version 04.20.*IF*

Managed System Status					
	Status	Name	Product	Version	Managing System
	ONLINE	IRAM:CXEGDSST:MVSA:STORAGE	S3	04.20.02	DEMO:MVSA:STORAGE
	*ONLINE	CXEGDSST:MVSA:STORAGE	S3	04.20.02	IRAM:CXEGDSST:MVSA:STORAGE

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Interim Feature 1



IF1

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Interim Feature 1 Enhancements



- Edit BATCH JCL Enhancement
- Space Statistic Metrics
- Solid State Device Support
- More attributes in TDW

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- Edit BATCH JCL Enhancement

```
1-----2-----3-----4-----5-----6-----7-----8-----+
//JFRAZ2AA JOB (ACCOUNT), 'JFRAZ2',MSGCLASS=X,MSGLEVEL=(1,1),
//NOTIFY=TSOPSEX,CLASS=B,REGION=6M
//*****
//* ALLOCATE JFRAZ2.SEQ.JOB04 AND COPY ENTIRE DATA SET   ***
//* JFRAZ2.SEQ.JOB02                                     ***
//*****
//STEP1 EXEC PGM=IEBCOPY
//SYSUT1 DD DSN=JFRAZ2.SEQ.JOB02,DISP=SHR
//SYSUT2 DD DISP=(,CATLG|,DSN=JFRAZ2.SEQ.JOB05D,
// LIKE=JFRAZ2.SEQ.JOB02
//SYSPRINT DD SYSOUT=*
//SYSIN DD DUMMY
```

REP LINE 1 COL 1

OK Cancel Help

- FB 80 requirement Ruler line # Insert Col indicator

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Interim Feature 1 Enhancements



Space Statistic Metrics

TRACKS
CYLINDERS
MEGABYTES
GIGABYTES

% UTILIZED
% FREE

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Interim Feature 1 Enhancements



Solid State Device Support

The screenshot shows the OMEGAMON XE for Storage interface. The 'Volume Performance Report' is displayed, showing a table of performance metrics for storage volumes. A red box highlights the 'Solid State Device' field, which contains the value 'No' for both listed volumes.

Volume	er nd	I/O Delay	Pend Time	Connect Time	Disconnect Time	Response Time	MSR Connect Time Percent	I/O Count	Device	DCBs Open	Reserved Percent	Average HyperPAW Alias Count	Average Command Response Delay	Current PAW Exposures	PAW Exposure Changed	Max Ex
WAS001	1.0	0.0	0.2	0.0	0.0	0.3	0.0	12	0	0	0.0	n/a	0.1	0	No	
WAS002	1.0	0.0	0.1	0.0	0.0	0.2	0.0	12	0	0	0.0	n/a	0.1	0	No	

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Interim Feature 1 Enhancements



More attributes in TDW

- Channel Path
- Cache control Unit
- Logical control Unit
- Volume Group Summary

By moving historical trending into the Tivoli Data Warehouse Summarization and Pruning are now available

Be careful to match history collection to RMF interval

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Interim Feature 2



IF2

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Interim Feature 2 Enhancements



- Dynamic DASD Volume Groups
- Dynamic Dataset Groups
- Improved Tivoli Data Warehouse Support
- Hitachi DASD Support

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Interim Feature 2 Enhancements



Static DASD Volume Groups

hlq.RTE.RKANPARU(KDFDUDGI)

User DASD Groups defined by volser pattern, storage group pattern, unit address at configuration time or manually edited in RKANPARU

Refresh: MODIFY Command against TEMS to refresh

/F temsname,DFREF membername

or

RECYCLE TEMS

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Interim Feature 2 Enhancements



Static DASD Volume Groups

hlq.RTE.RKANPARU(KDFDUDGI)

```
*- MEMBER: KDFDUDGI -X
*- LIBRARY: RKANPARU -X
*- -X
*- PURPOSE: SPECIFY KEYWORDS THAT SELECT DEVICES ELIGIBLE FOR -X
*- USER DASD GROUP MONITORING BY THE TEMS -X
*- ADDRESS SPACE, AND SPECIFY KEYWORDS THAT CONTROL -X
*- DEVICE MONITORING OPTIONS. -X
*- -X
*- -X
*- DEVICE SELECTION KEYWORDS: -X
*- -X
*- SYNTAX: NAME (PRODSTORAGE) -X
*- THE NAME OF THE USER DASD GROUP. THIS VALUE IS -X
*- REQUIRED, AND MUST BE THE FIRST KEYWORD OF A USER -X
*- DASD GROUP DEFINITION. IT MAY BE FROM 1 TO 16 -X
*- CHARACTERS IN LENGTH, AND MAY ONLY BE USED ONCE PER -X
*- GROUP. -X
*- -X
*- MONITOR - (ON OFF) SPECIFY THE INITIAL STATE OF THIS ENTRY. -X
*- THE DEFAULT IS MONITOR(ON) -X
*- -X
*- DEVICE - LIST OF ONE OR MORE HEX DEVICE NUMBERS -X
*- EXAMPLES: DEVICE(030F) -X
*- DEVICE(030A,0318) -X
*- -X
*- DEVRANGE - LIST OF ONE OR MORE HEX DEVICE NUMBER PAIRS THAT -X
*- SPECIFY A RANGE OF DEVICES. THE HEX NUMBERS THAT -X
*- MAKE UP A PAIR MUST BE SEPARATED BY A COLON. -X
```

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Interim Feature 2 Enhancements



Static DASD Volume Groups

hlq.rte.RKANPARU(KDFDUDGI)

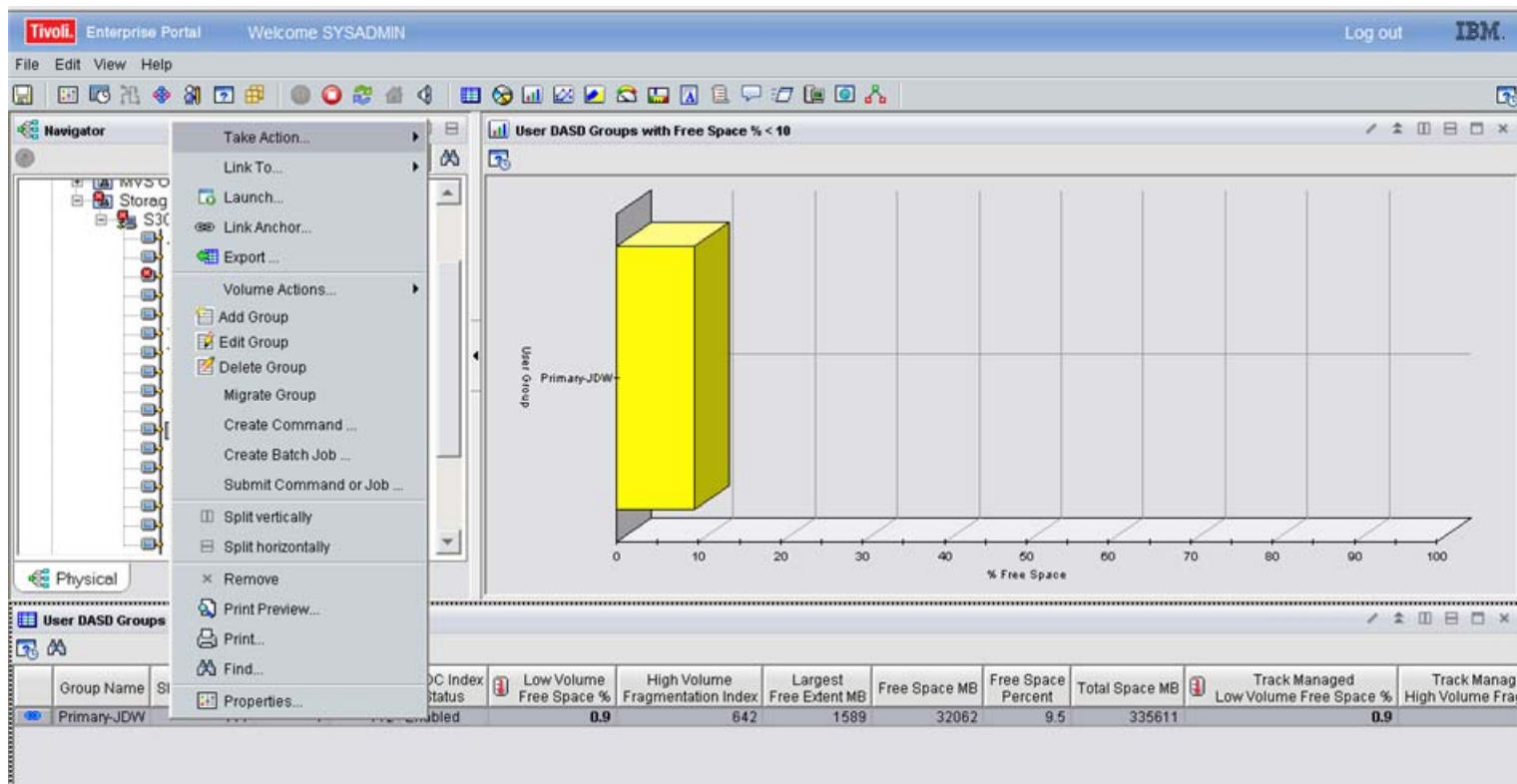
```
NAME (DEMO) -  
MONITOR (ON) -  
VOLSER (DMT?)  
*
```

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Interim Feature 2 Enhancements



Dynamic DASD Volume Groups



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Dynamic DASD Volume Groups

Persist

✓ PERSIST

keeps definition across TEMS restarts

Unchecked discards definition

OK Cancel Help

Define the DASD devices to include in a user DASD group

Volser or Pattern	
DMT	

First Device	Last Device (Optional)

SMS Storage Group	

OK Cancel Help

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Dynamic DASD Volume Groups

Conditionally
Include
volumes
in the
list

The screenshot shows a dialog box titled "Add User DASD Group" with three tabs: "Group", "Volumes", and "Attributes". The "Attributes" tab is selected, displaying an "Attribute Constraint" table with three columns: "Attribute", "Operator", and "Value". The table is currently empty. At the bottom of the dialog are "OK", "Cancel", and "Help" buttons.

Attribute	Operator	Value
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Interim Feature 2 Enhancements



Dynamic DASD Volume Groups

Persistent or temporary User Dasd Groups return the same Information



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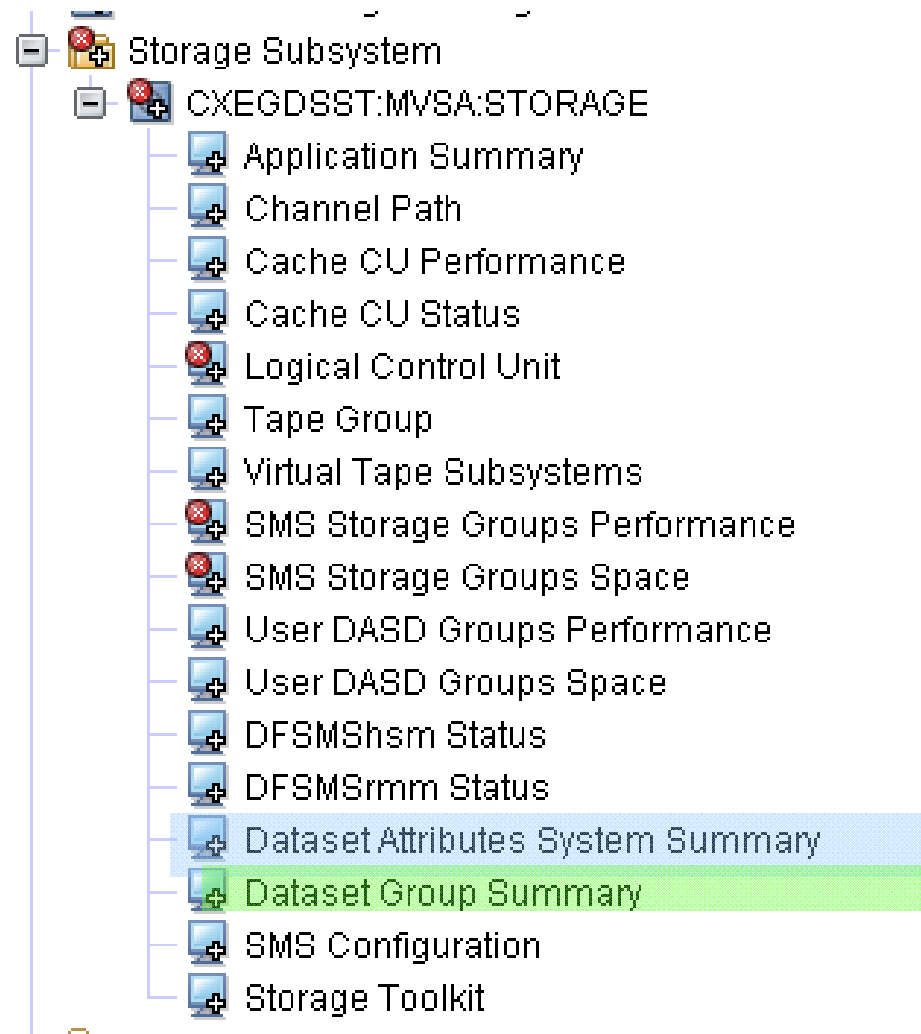
Interim Feature 2 Enhancements



Dataset Attributes Database
Compared to
Dataset Group Summary

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Dataset Attributes Database

Collected once every 24 hours by a schedule datasets found on all scanned volumes.

Dataset Attribute Summary													
Status Message	Collection Start Time	Collection End Time	Volumes Online	Volumes Processed	Datasets Processed	Available Tracks	Allocated Tracks	Used Tracks	Unused Tracks	Percent Allocated	Percent Used	Percent Free	
Collection completed	08/03/10 01:00:40	08/03/10 01:15:20	1175	1048	205792	106246980	59406762	48363423	11043339	55.9	81.4	18.6	

Dataset Group Summary

Collected as indicated in the “Collection Interval” using a dataset mask and starting with the datasets catalog entries.

The Collection interval might be the RMF interval, every 6 hours or On Demand (ie when navigating to the workspace)

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Interim Feature 2 Enhancements



Dynamic Dataset Groups is in the TEMS address space

To ANALYZE a subset of the data, use the dynamic Data Groups workspace to select the data from the Dataset Attributes Data Base.

To search through the thousands and hundreds of thousands of datasets for only those you are interested in.

996 volumes	225,258 datasets
2111 volumes	489,752 datasets
5432 volumes	1,048,376 datasets
7024 volumes	1,453,968 datasets

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Interim Feature 2 Enhancements



Dynamic Dataset Groups TOP 'N' Reports

Default '20'

Max '100'

Dataset Attributes Data Collection

Data Collection Settings

Start data collection at (hh:mm) 03:30 am pm

Every

Mon Tue Wed Thur Fri Sat Sun

Stop data collection at (hh:mm) am pm

Collect catalog data

Number of data rows to collect for top N' reports: 100

Exclusions

Volumes:

Volser or Pattern
DMT*
SC*
TV*

Storage Groups:

Group Name or Pattern
DLGROUP
DMGROUP
DMGROUPD

Data Collection Status

Collection is waiting

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Dynamic Dataset Groups TOP 'N' Reports



The screenshot displays the Tivoli Enterprise Portal interface with several reports open. The 'Top Datasets by Allocated Space' report is highlighted with a red box. Other reports visible include 'Top Datasets by Extents', 'Top Datasets by CA Splits', 'Top Datasets by Used Space', and 'Top Datasets by CI Splits'. The interface includes a Navigator pane on the left and a status bar at the bottom.

Dataset Name	Volser	Allocated Tracks	Used Tracks	Extents	DSORG
PAGE.DEMOMVS.LOCAL3.DATA	DMPPG3	135000	135000	0	1 VSAM
PAGE.ESYSMVS.LOCAL5.DATA	DMEPG5	135000	135000	0	1 VSAM
PAGE.DEMOMVS.LOCAL4.DATA	DMPPG4	135000	135000	0	1 VSAM
PAGE.DEMOMVS.LOCAL2.DATA	DMPPG2	135000	135000	0	1 VSAM
PAGE.DEMOMVS.LOCAL5.DATA	DMPPG5	135000	135000	0	1 VSAM
PAGE.ESYSMVS.LOCAL3.DATA	DMEPG3	135000	135000	0	1 VSAM
PAGE.ESYSMVS.LOCAL4.DATA	DMEPG4	135000	135000	0	1 VSAM
SMF.ACCUM.LOG.\$JUL2010.FILE1	DMEP10	72390	72390	0	20 Extended Sequential
DDS0544.DUMP	DMPW01	62850	925	61925	1 Physical Sequential
DNET804.SSA10089.SMF	DMPU05	62850	62850	0	1 Physical Sequential
DLIB.SERVICE.HFS	DMEU08	61680	61680	0	1 HFS
DNET089.SLDS	DMPU07	60330	60330	0	4 Physical Sequential
DNET176.SS.SMFDB2.UNTERSE	DMPU31	60210	60210	0	16 Physical Sequential
KL.T.DFDSS.OMPE.FX77	TSTD11	60000	54234	5766	1 Physical Sequential
DNET060.ANICO.APR.TS2.SMF	DMPU17	57570	57570	0	4 Physical Sequential
DNET060.ANICO.APR.TS1.SMF	DMPU16	57570	57570	0	4 Physical Sequential
DNET176.SS.SMFDB2.TERSE	DMPU32	55050	55050	0	16 Physical Sequential

Dataset Name	Volser	Unused Tracks	Allocated Tracks	Used Tracks	Extents	DSORG
DNET973.HFS	DMPU25	123	126	126	0	HFS
DBA287.HFS	DMPU25	123	127	127	0	HFS
SYSD29.HFS	DMEU01	123	124	124	0	HFS
OMVS.DEMOMVS.TMP.HFS	DMP505	123	25530	25530	0	HFS
DNET807.HFS	DMPU49	123	126	126	0	HFS
DNET061.HFS	DMPU37	123	140	140	0	HFS

Dataset Name	Volser	CI Splits	CA Splits	Assoc D
CATALOG.MASTER.MCAT	DMPCAT	83	24827	CATALOG.MASTER.MCAT
DEMO.USER00.V6R2.ADMIN.LOG.DATA	DMPU05	28	2	DEMO.USER00.V6R2.A
INFOSC.V6R2.INST1.VSAM.DATA	DMPU31	28	209	INFOSC.V6R2.INST1.V
DNET670.INFOCDC.V6R2.PAL.DATA	DMPU31	24	178	DNET670.INFOCDC.V
DNET356.DDIR.D	DMPU23	23	358	DNET356.DDIR
DWEIAND.DDIR.D	DMPU28	23	363	DWEIAND.DDIR

Dataset Name	Volser	Unused Tracks	Allocated Tracks	Used Tracks	Extents	DSORG
DDS0544.DUMP	DMPW01	61925	62850	925	1	Physical Sequential

Dataset Name	Volser	CI Splits	CA Splits	Assoc D
CATALOG.MASTER.MCAT	DMPCAT	24827	83	CATALOG.MASTER.MCAT

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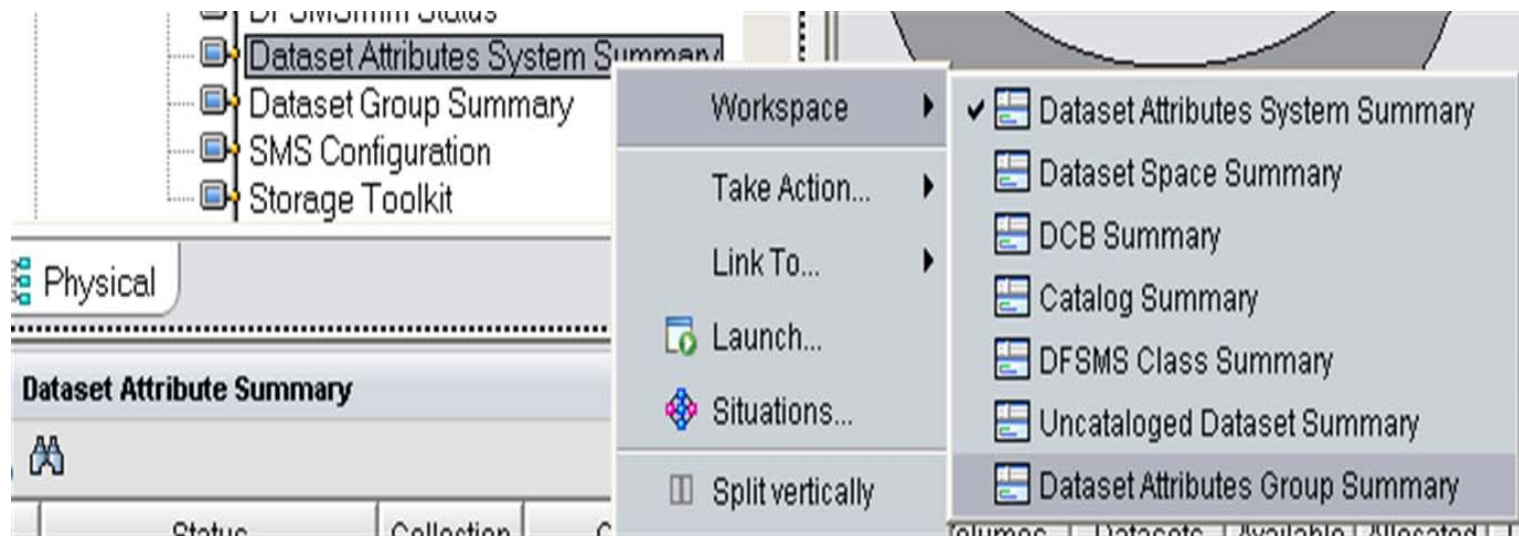
Interim Feature 2 Enhancements



Dynamic Dataset Groups

Right click the Dataset attributes system Summary

Navigator item and select the [Dataset Attributes Group Summary](#)



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Interim Feature 2 Enhancements



Dynamic Dataset Groups

previously defined groups appear along with their metrics. New ones are created by right clicking the row and add a Group.

The screenshot shows the OMEGAMON XE for Storage interface. On the left is a tree view with categories like 'Cache CU Performance', 'Logical Control Unit', 'Tape Group', 'Virtual Tape Subsystems', 'SMS Storage Groups Performance', 'SMS Storage Groups Space', 'User DASD Groups Performance', 'User DASD Groups Space', 'DFSMSshm Status', 'DFSMSsrm Status', 'Dataset Attributes System Summary', 'Dataset Group Summary', 'SMS Configuration', and 'Storage Toolkit'. The 'Dataset Attributes System Summary' is selected. Below the tree is a 'Physical' tab and a 'Dataset Attributes Group Summary' section. The main area contains a graph with 'Tracks' on the x-axis. At the bottom is a table with columns: Group Name, Number of Datasets in group, Total Allocated Tracks, Maximum Allocated Tracks, Minimum Allocated Tracks, Total Used Tracks, Maximum Used Tracks, Minimum Used Tracks, Total Unused Tracks, Maximum Unused Tracks, Minimum Unused Tracks, and Unus Per To. The table has two rows: MMICH and MMICH2, with 'n/a' values. A context menu is open over the table, showing options like 'Export...', 'Dataset Actions', 'Add Group', 'Edit Group', 'Delete Group', 'Create Command...', 'Create Batch Job...', 'Submit Command or Job...', 'Split vertically', 'Split horizontally', 'Remove', 'Print Preview...', 'Print...', 'Find...', and 'Properties...'. A red arrow points to the 'Add Group' option.

Group Name	Number of Datasets in group	Total Allocated Tracks	Maximum Allocated Tracks	Minimum Allocated Tracks	Total Used Tracks	Maximum Used Tracks	Minimum Used Tracks	Total Unused Tracks	Maximum Unused Tracks	Minimum Unused Tracks	Unus Per To
MMICH	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MMICH2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Interim Feature 2 Enhancements



Dynamic Dataset Groups

Group name
and
Definition

A screenshot of a Windows-style dialog box titled 'Add User Dataset Group'. The dialog has three tabs: 'Group', 'Properties', and 'Attributes'. The 'Properties' tab is selected. Inside the dialog, there are two text input fields: 'Name' with the value 'VDAULT' and 'Description' with the value 'Vickies Datasets'. Below these fields is a checkbox labeled 'Persist' which is checked. At the bottom right of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

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Interim Feature 2 Enhancements



Dynamic Dataset Groups

Group Properties
Narrowing down the
Data

Add User Dataset Group

Group Properties

Dataset Name: VDAUL.*

Catalog Name: CATALOG.VUSER

Associated Name:

SMS

Data Class	Storage Class	Management Class
		PNOMIG

Storage Group:

Owner:

Volser: TTSO*

OK Cancel Help

*Syntax may be incorrect

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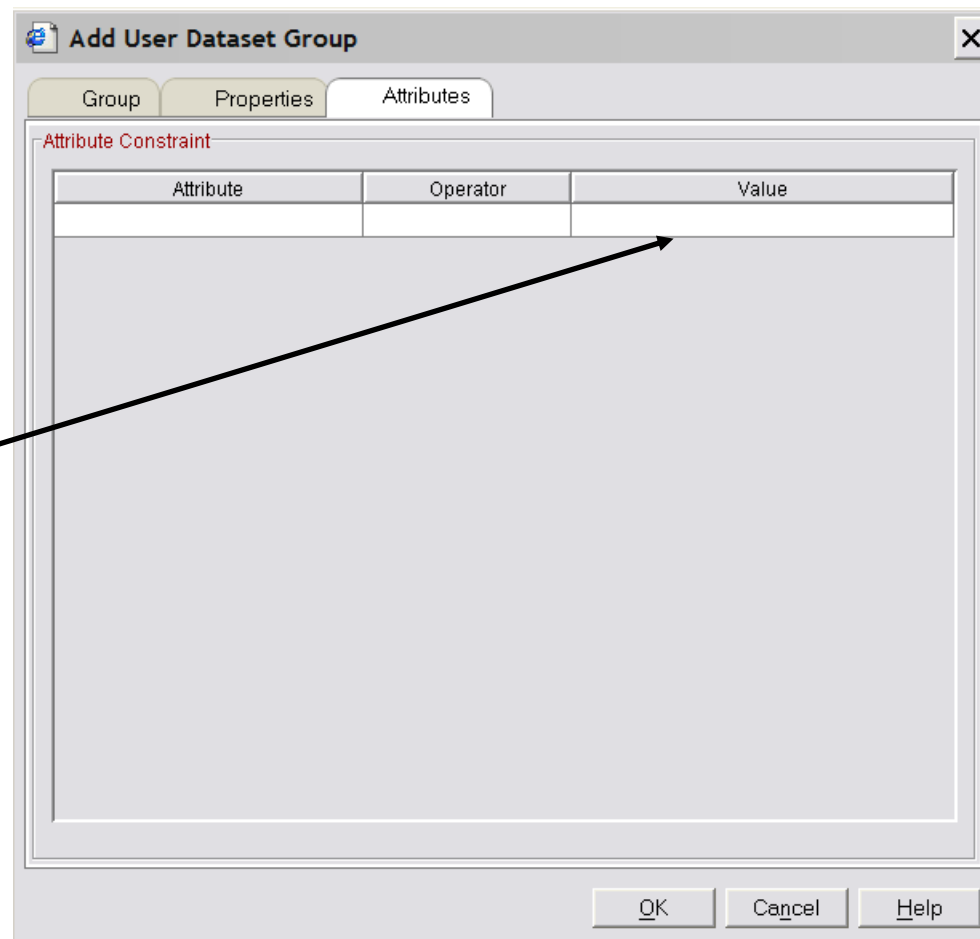
Interim Feature 2 Enhancements



Dynamic Dataset Groups

Further qualify
Data of interest

Attributes selected
From drop down



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Interim Feature 2 Enhancements



Dynamic Dataset Groups

Results returned in a new row

Group Name	Number of Datasets in group	Total Allocated Tracks	Maximum Allocated Tracks	Minimum Allocated Tracks	Total Used Tracks	Maximum Used Tracks	Minimum Used Tracks	Total Unused Tracks	Maximum Unused Tracks	Minimum Unused Tracks	Unused Tracks as Percentage of Total Tracks	Used Tracks as Percentage of Total Tracks	Maximum Days Since Referenced	Oldest Creation Date	Description
------------	-----------------------------	------------------------	--------------------------	--------------------------	-------------------	---------------------	---------------------	---------------------	-----------------------	-----------------------	---	---	-------------------------------	----------------------	-------------

Storage toolkit actions available

link to details

Situation monitoring

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Interim Feature 2 Enhancements



Improved Tivoli Data Warehouse Support

Logical Volume Cache Attributes
Logical Volume Space Attributes
Logical Volume Performance Attributes

Summarization and Pruning

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Interim Feature 2 Enhancements



Hitachi DASD Support

	Subsystem ID	Control Unit Type	Active Volumes	Deactivated Volumes	Cache Status	Cache MB Configured	Cache MB Available	NVS Status	NVS KB Configured	NVS KB Pinned	Storage Facility Series
	C000	2107	256	0	Active	13920.0	11127.9	Active	524288	0	DS8000
	C100	2107	68	0	Active	13920.0	11127.9	Active	524288	0	DS8000
	C200	2107	34	0	Active	13920.0	11127.9	Active	524288	0	DS8000
	C300	2107	24	0	Active	13920.0	11127.9	Active	524288	0	DS8000
	D000	2107	192	0	Active	1314.9	963.0	Active	131072	0	DS6000
	E000	2107	196	0	Active	1314.9	963.0	Active	131072	0	DS6000
	F000	2107	196	0	Active	1314.9	963.0	Active	131072	0	DS6000

- Cache CU Volume Cache Performance
- Cache CU Volume Performance
- Cache CU Status Trend
- TotalStorage Configuration
- TotalStorage CU Volumes
- Link Wizard...
- Link Anchor...

OMEGAMON XE for Storage

Interim Feature 3



IF3

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Interim Feature 3 Enhancements



-
-
-

Too early to tell

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Data Collection



BATCH

?

VS

REAL TIME

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Data Collection



- 4 types of data
 - **Performance**
 - Volume
 - Dataset
 - Cross System
 - **Space**
 - Storage Group
 - Volume
 - Dataset
 - **Dataset attributes**
 - DCB attributes: dsorg, blksize
 - creation date, last referenced, never referenced
 - tracks allocated/used, Extents, CI and CA splits
 - Catalog status, uncataloged datasets, SMS constructs used
 - **RMM attributes**
 - Statistics: distribution of records, parmlib options

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Data Collection



- FREQUENCY of collection **DEFAULTS***
 - **Performance**

Cache Statistics	every 5 minutes
Dataset I/O	every minute
 - **SPACE**

Space & Fragmentation Index	RMF Interval
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 - **Dataset attributes** once every 24 hours
 - **RMM attributes** once every 24 hours

* These values can be customized

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Data Collection



Performance Data

Cache Statistics	every 5 minutes
Dataset I/O	every minute

There are 3 methods for monitoring dataset response time and cache statistics:

Every I/O

Every nth I/O

MSR Millisecond Response time Interval

no results are collected if the threshold has not been exceeded

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Data Collection



Space

Space & Fragmentation Index RMF Interval

Volume information is obtained every RMF interval (by default)

Storage Group metrics are calculated.

Dataset information is obtained when navigating to the workspace

The query executes. *Real Time*

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Data Collection



DataSet Attributes

Dataset attributes

once every 24 hours

- Automation or Operator command can re-drive Dataset Attributes Collector

/F temsname,S3DA START

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Data Collection



RMM Attributes

RMM attributes

once every 24 hours

- Automation or Operator command can re-drive the RMM Attributes Collector

/F temsname,S3RM START

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Questions



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Reference



Tivoli OMEGAMON XE for Storage on z/OS Planning and Configuration Guide	SC23-9702-00
Tivoli OMEGAMON XE for Storage on z/OS User's Guide	SC23-9703-02
Tivoli OMEGAMON XE for Storage on z/OS Tuning Guide	SC23-9704-01
Tivoli OMEGAMON XE for Storage on z/OS Troubleshooting Guide	SC23-9705-02