



MONITORING with OMEGAMON XE for Storage

Vickie Dault
IBM Corporation

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Session 14163





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Agenda

- Monitoring with existing workspaces
 - Application Summary
 - SMS Storage Group Space | Performance
 - User DASD Group Space | Performance
 - DFHSM Status
- Visual indicators
 - Thresholds
 - Event Indicators
- Situations
 - Attribute Groups
- Performance
- New Features
 - Version 5.2



Refer to Session 14121 Monday 4:30 pm



Monitoring with Existing Workspaces

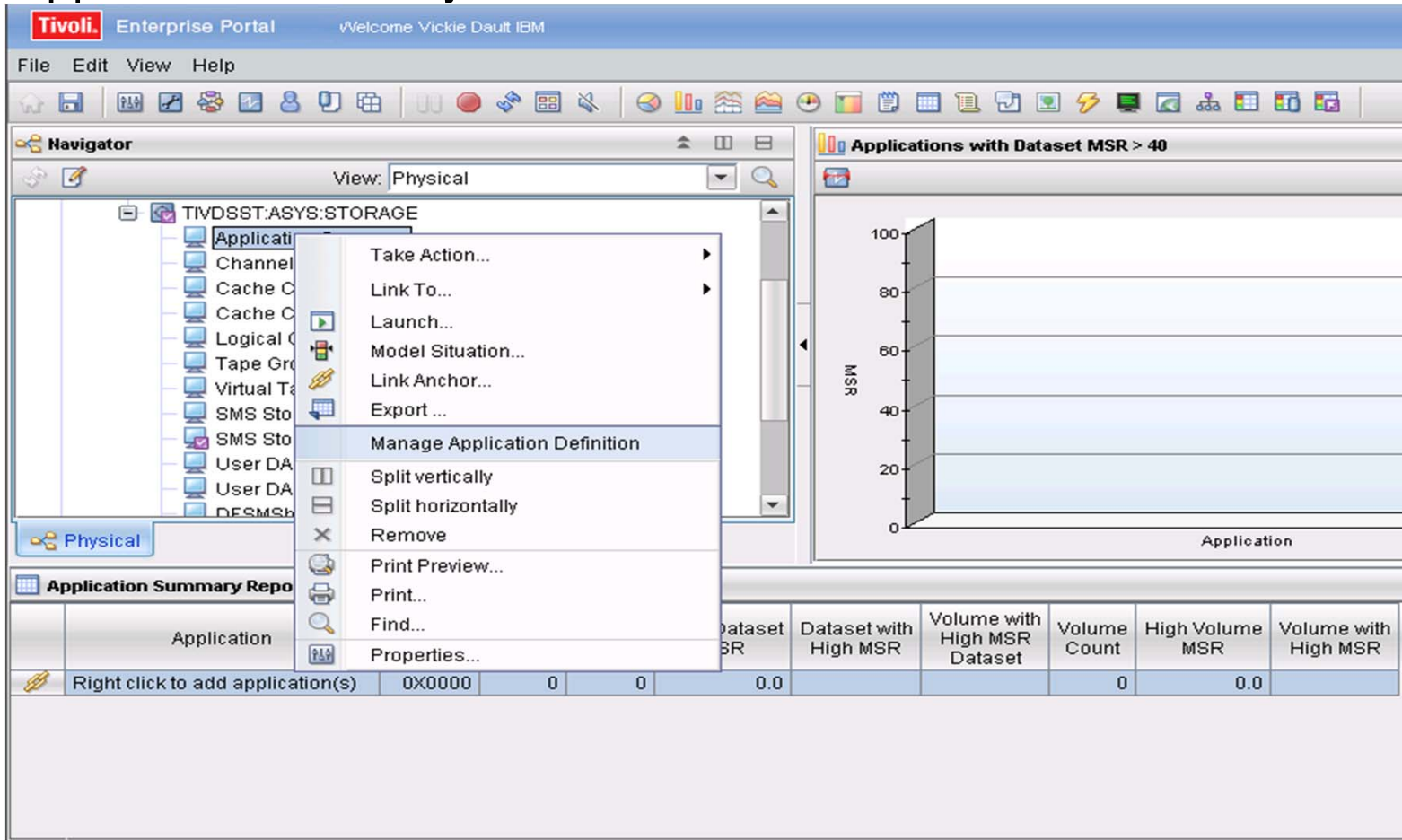


Application Summary



Monitoring using Existing Workspaces

- Application Summary



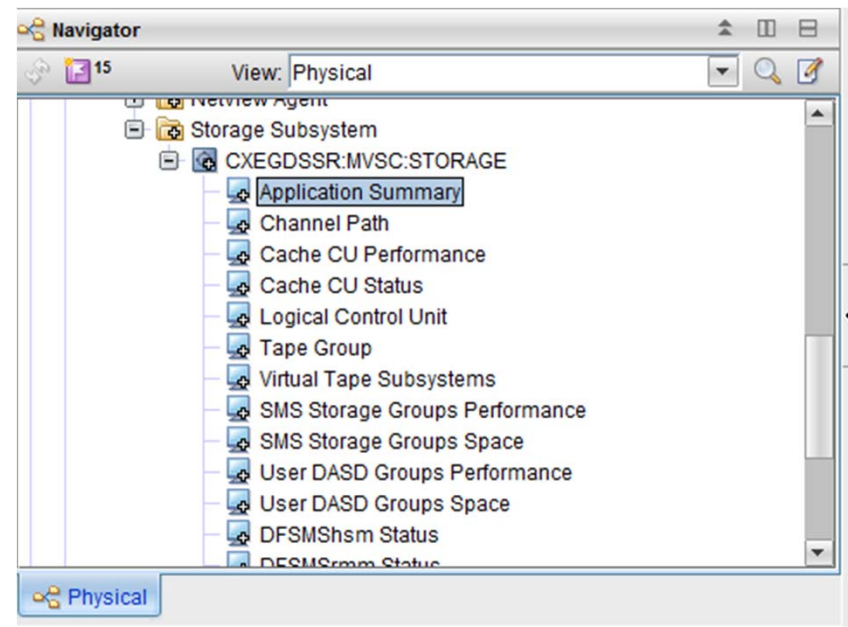
The screenshot shows the Tivoli Enterprise Portal interface. The top navigation bar includes 'File', 'Edit', 'View', and 'Help'. The main area is divided into several panes:

- Navigator:** Shows a tree view of storage components under 'TIVDSST:ASYS:STORAGE'. A context menu is open over the 'Application' folder, with 'Manage Application Definition' selected.
- Applications with Dataset MSR > 40:** A chart showing MSR values for various applications. The Y-axis is labeled 'MSR' and ranges from 0 to 100. The X-axis is labeled 'Application'.
- Application Summary Report:** A table with columns for 'Application', 'Dataset MSR', 'Dataset with High MSR', 'Volume with High MSR Dataset', 'Volume Count', 'High Volume MSR', and 'Volume with High MSR'. The first row shows a right-click action to add application(s) with values: 0X0000, 0, 0, 0.0, 0, 0.0, 0.

Monitoring using Existing Workspaces

- Application Summary

Ensure critical business services performance and availability by monitoring and alerting on dataset level MSR and Cache performance as well as allocations of its datasets and the volumes they are allocated on

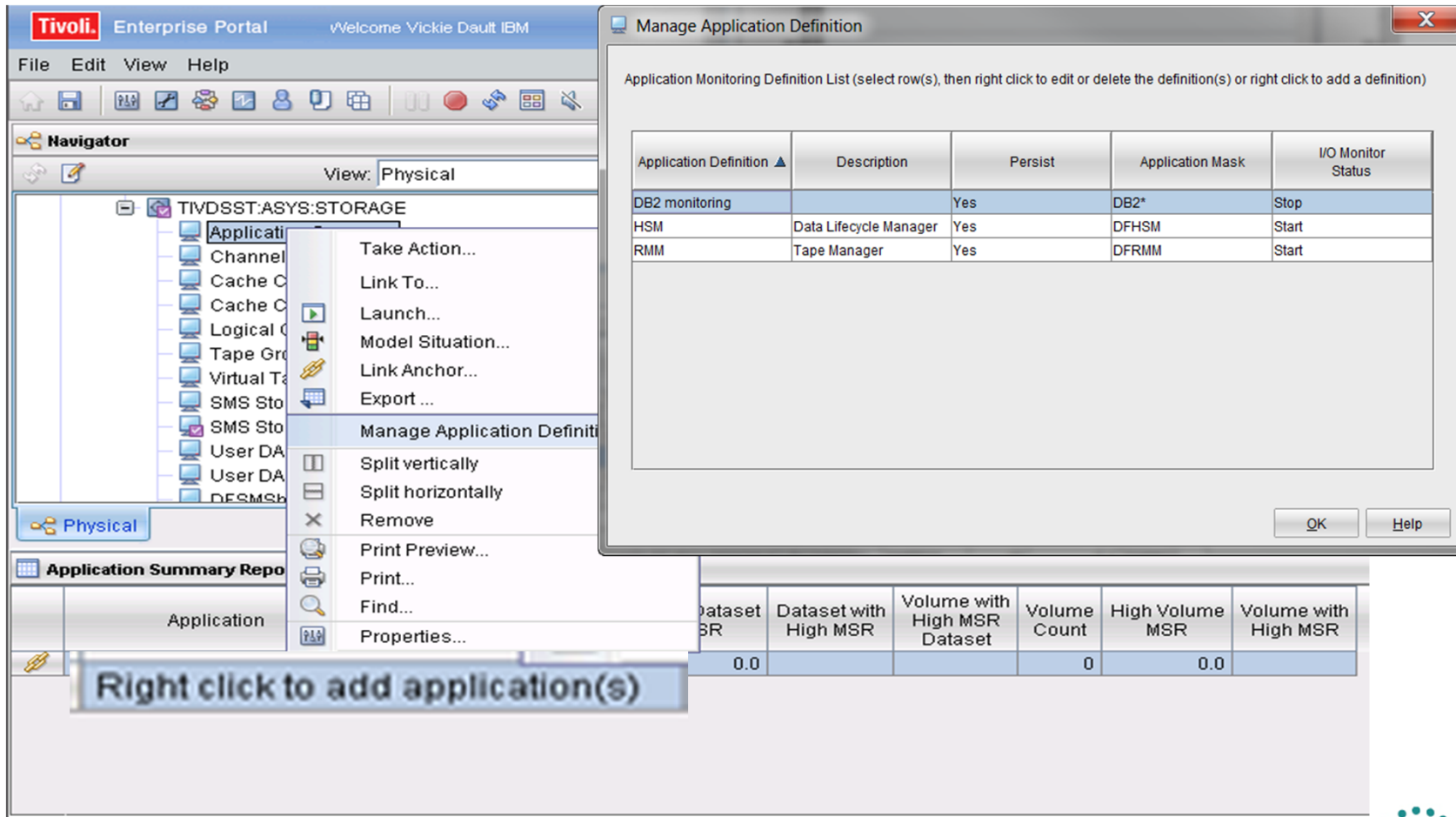


- Define your business critical applications and trend their space and performance over time.

MAJOR BENEFIT

Monitoring using Existing Workspaces

- Application Summary



The screenshot shows the Tivoli Enterprise Portal interface. On the left, the 'Navigator' pane displays a tree view of storage components under 'TIVDSST:ASYS:STORAGE'. A context menu is open over the 'Application' folder, with 'Manage Application Definition' selected. The 'Manage Application Definition' dialog box is open in the foreground, displaying a table of application monitoring definitions. Below the dialog, the 'Application Summary Report' table is visible, showing metrics for datasets and volumes.

Manage Application Definition Dialog:

Application Definition	Description	Persist	Application Mask	I/O Monitor Status
DB2 monitoring		Yes	DB2*	Stop
HSM	Data Lifecycle Manager	Yes	DFHSM	Start
RMM	Tape Manager	Yes	DFRMM	Start

Application Summary Report Table:

Dataset	Dataset with High MSR	Volume with High MSR Dataset	Volume Count	High Volume MSR	Volume with High MSR
0.0			0	0.0	

Context Menu:

- Take Action...
- Link To...
- Launch...
- Model Situation...
- Link Anchor...
- Export ...
- Manage Application Definition**
- Split vertically
- Split horizontally
- Remove
- Print Preview...
- Print...
- Find...
- Properties...

Annotation: Right click to add application(s)

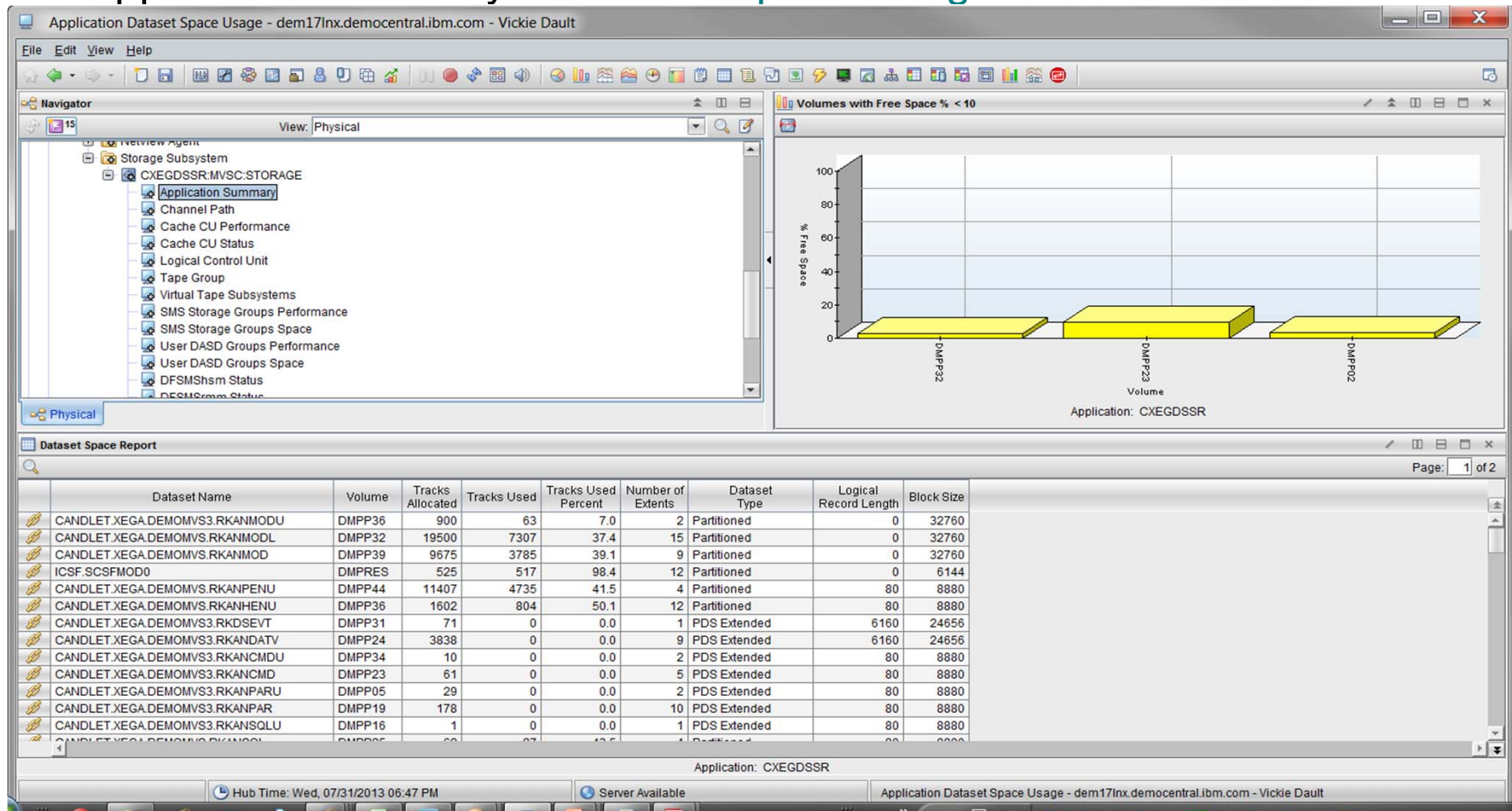
Monitoring using Existing Workspaces

- Application Summary **LINKS**

Application Summary Report										
Application	ASID Hex	I/O Second	Dataset Count	High Dataset MSR	Dataset with High MSR	Volume with High MSR Dataset	Volume Count	High Volume MSR	Volume with High MSR	
DFRMM	0X0024	1	4	0.3	COMMON.RMM.CONTROL.DATA	DMPCOM	2	2.3	DMPPRES	
CXEGN2	0X0026	0	10	0.0			15	8.4	DMPP32	
C	Application Dataset Performance				0.0		16	8.4	DMPP32	
C	Application Volume Performance				12.4	SYS1.VTOC.VDMPP32	DMPP32	4	7.9	DMPP36
N	Application Volume Cache				0.0		1	3.7	DMPP12	
C	Application Dataset Space Usage				0.0		4	4.9	DMPCAT	
N	Application Volume Space Usage				2.5	IMS.V11R1.SDFSRESL	DMPP38	40	8.4	DMPP32
C	Address Space CPU Usage Details				0.0		2	7.8	DMPP39	
C	Address Space CPU Usage Enclaves				0.6	CANDLET.XEGA.DEMOMVS.RKANMOD	DMPP39	8	7.9	DMPP36
C	Address Space Bottleneck Details				0.0		2	7.8	DMPP39	
C	Address Space Impact Analysis				0.6	CANDLET.XEGA.DEMOMVS.RKANMOD	DMPP39	12	8.4	DMPP32
C	Address Space Storage for Job				0.0		13	8.4	DMPP32	
C	Owned Enclaves				0.8	CANDLET.XEGA.DEMOMVS3.RKANMODU	DMPP36	11	8.4	DMPP32
C	Link Wizard...				0.0		9	7.9	DMPP36	
C	Link Anchor...				0.0		9	8.4	DMPP32	
C					0.0		16	8.4	DMPP32	
C					2.7	CANDLET.XEGA.DEMOMVS3.RKANMODU	DMPP36	45	8.4	DMPP32
CXEGOGW	0X0089	3	15	0.0			13	5.8	DMPP38	
CICSTIV3	0X008A	0	44	0.0			26	7.8	DMPP39	
NETVTSO	0X008C	0	3	0.0			3	4.9	DMPCAT	
NETVIO3	0X008D	1	3	0.0			3	4.7	DMPP24	
NETVTSO1	0X008F	0	3	0.0			3	4.9	DMPCAT	
CXEGN3	0X0091	0	11	0.0			10	8.4	DMPP32	
CXEGNA	0X0092	0	12	0.0			11	8.4	DMPP32	

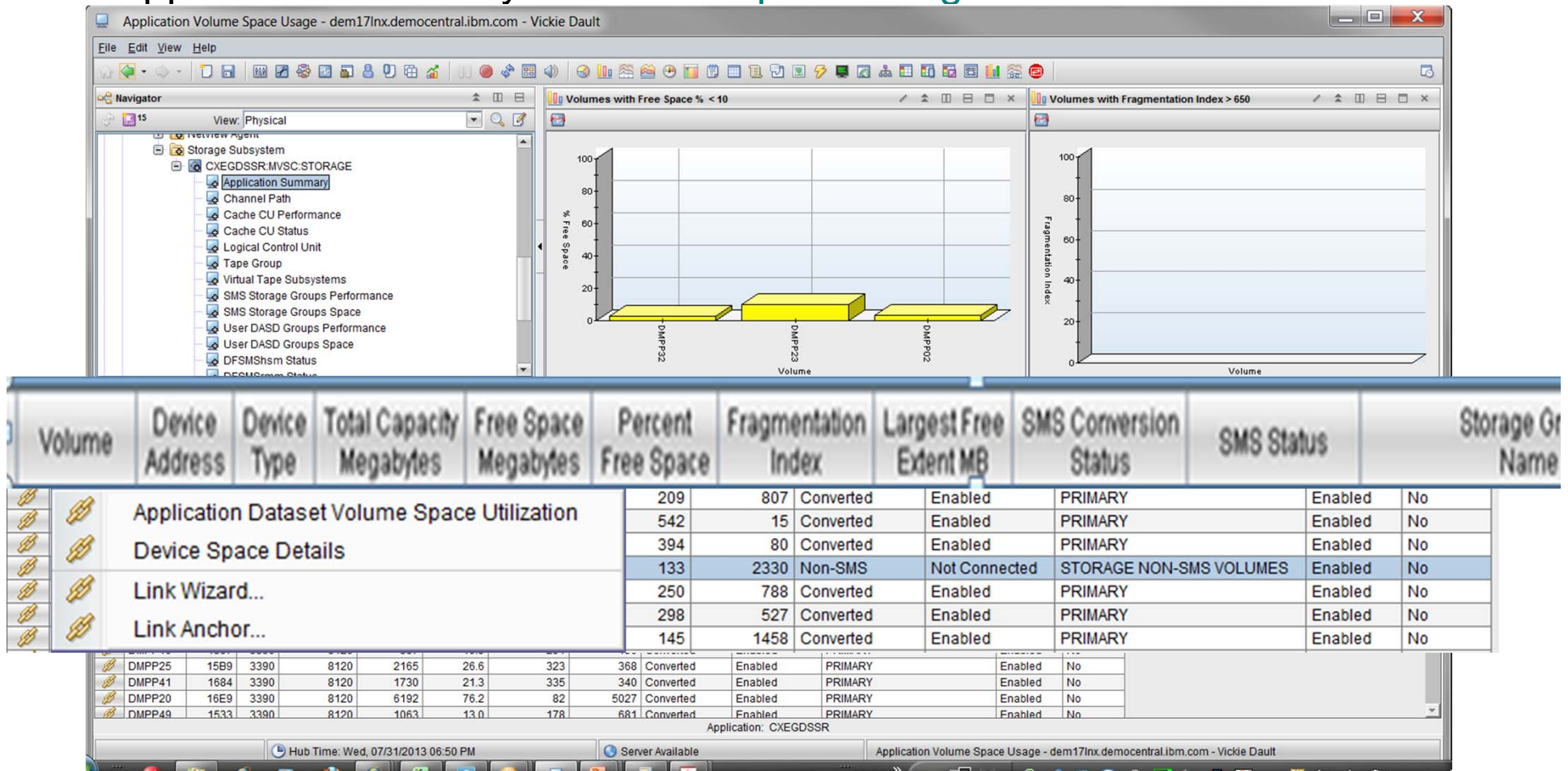
Monitoring using Existing Workspaces

- Application Summary - Dataset Space Usage

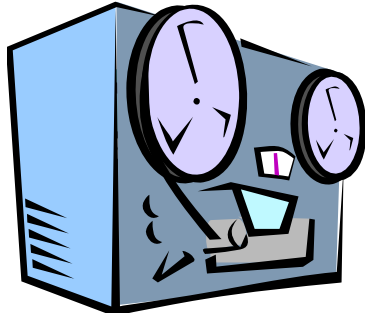


Monitoring using Existing Workspaces

- Application Summary - Volume Space Usage



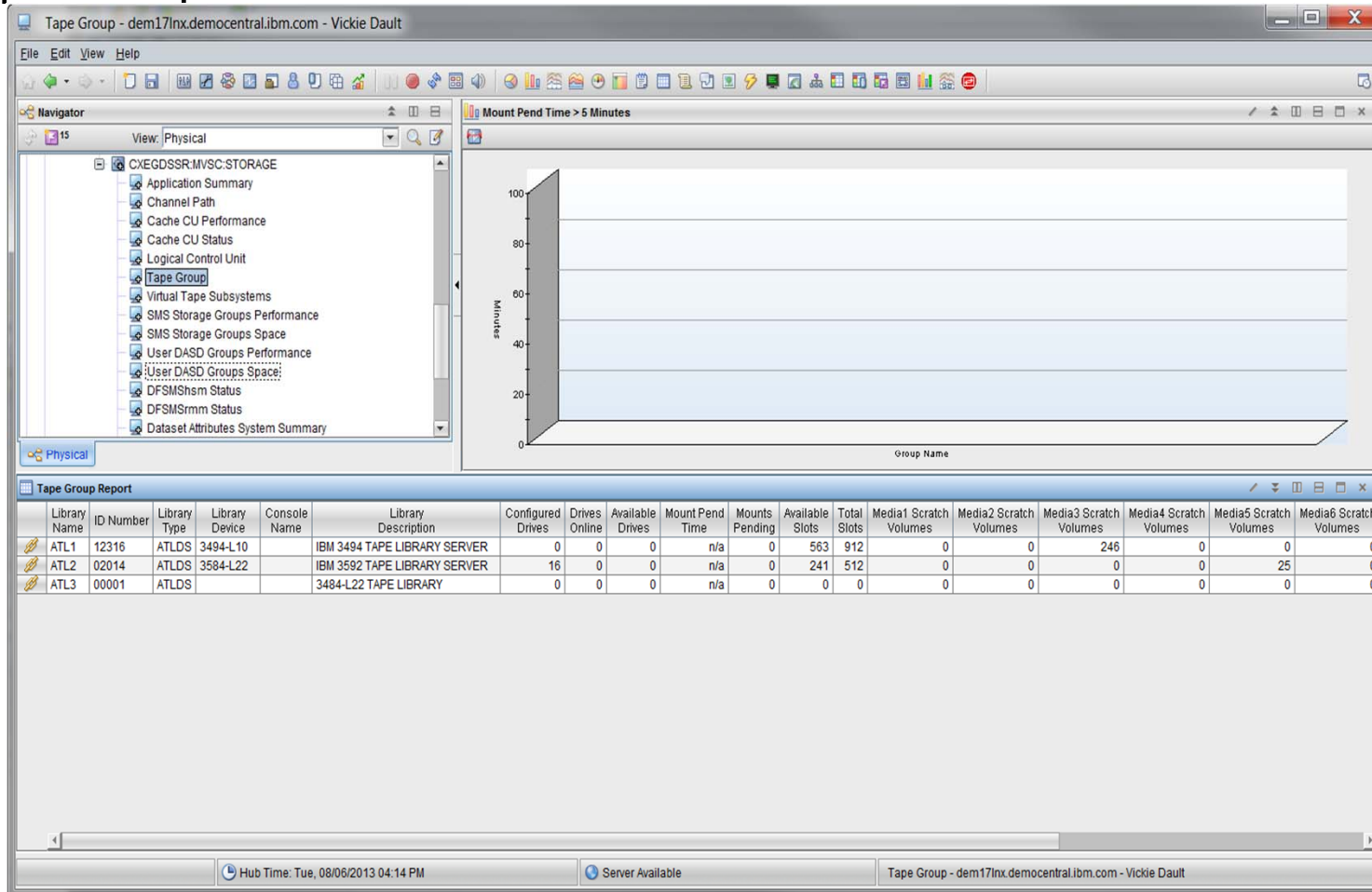
Monitoring with Existing Workspaces



Tape Group




Monitoring using Existing Workspaces

- Tape Group



Monitoring using Existing Workspaces

- Tape Group

Tape Group Report											
	Library Name	ID Number	Library Type	Library Device	Console Name	Library Description	Configured Drives	Drives Online	Available Drives	Mount Pend Time	Mounts Pending
	ATL1	12316	ATLDS	3494-L10		IBM 3494 TAPE LIBRARY SERVER	0	0	0	n/a	0
	ATL2	02014	ATLDS	3584-L22		IBM 3592 TAPE LIBRARY SERVER	16	0	0	n/a	0
	ATL3	00001	ATLDS			3484-L22 TAPE LIBRARY	0	0	0	n/a	0

How many of the configured drives are online and available?

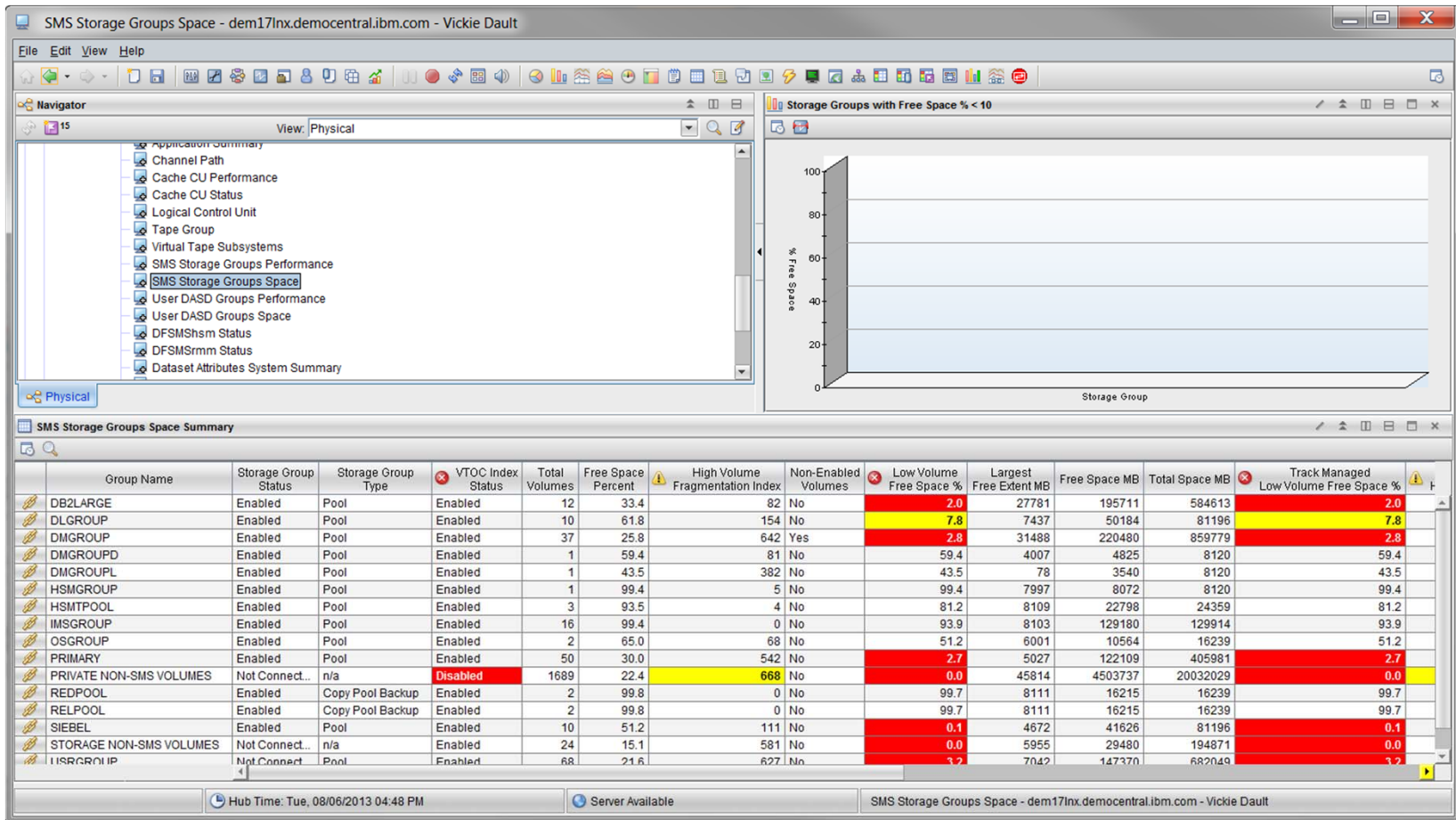
What is your drive utilization over a period of time ?

Monitoring with Existing Workspaces

SMS Storage Group Space | Performance






Monitoring using Existing Workspaces

- SMS Storage Group **Space and Performance**



Monitoring using Existing Workspaces

- SMS Storage Group **Space and Performance**

	Group Name	Storage Group Status	Storage Group Type	⊗ VTOC Index Status	Total Volumes	Free Space Percent	⚠ High Volume Fragmentation Index	Non-Enabled Volumes	⊗ Low Volume Free Space %
	DB2LARGE	Enabled	Pool	Enabled	12	33.4	82	No	2.0
	DLGROUP	Enabled	Pool	Enabled	10	61.8	154	No	7.8
	DMGROUP	Enabled	Pool	Enabled	37	25.8	642	Yes	2.8
	DMGROUPD	Enabled	Pool	Enabled	1	59.4	81	No	59.4
	DMGROUPL	Enabled	Pool	Enabled	1	43.5	382	No	43.5

Are there SMS Storage Groups with index VTOCs disabled?

Is the fragmentation index too high

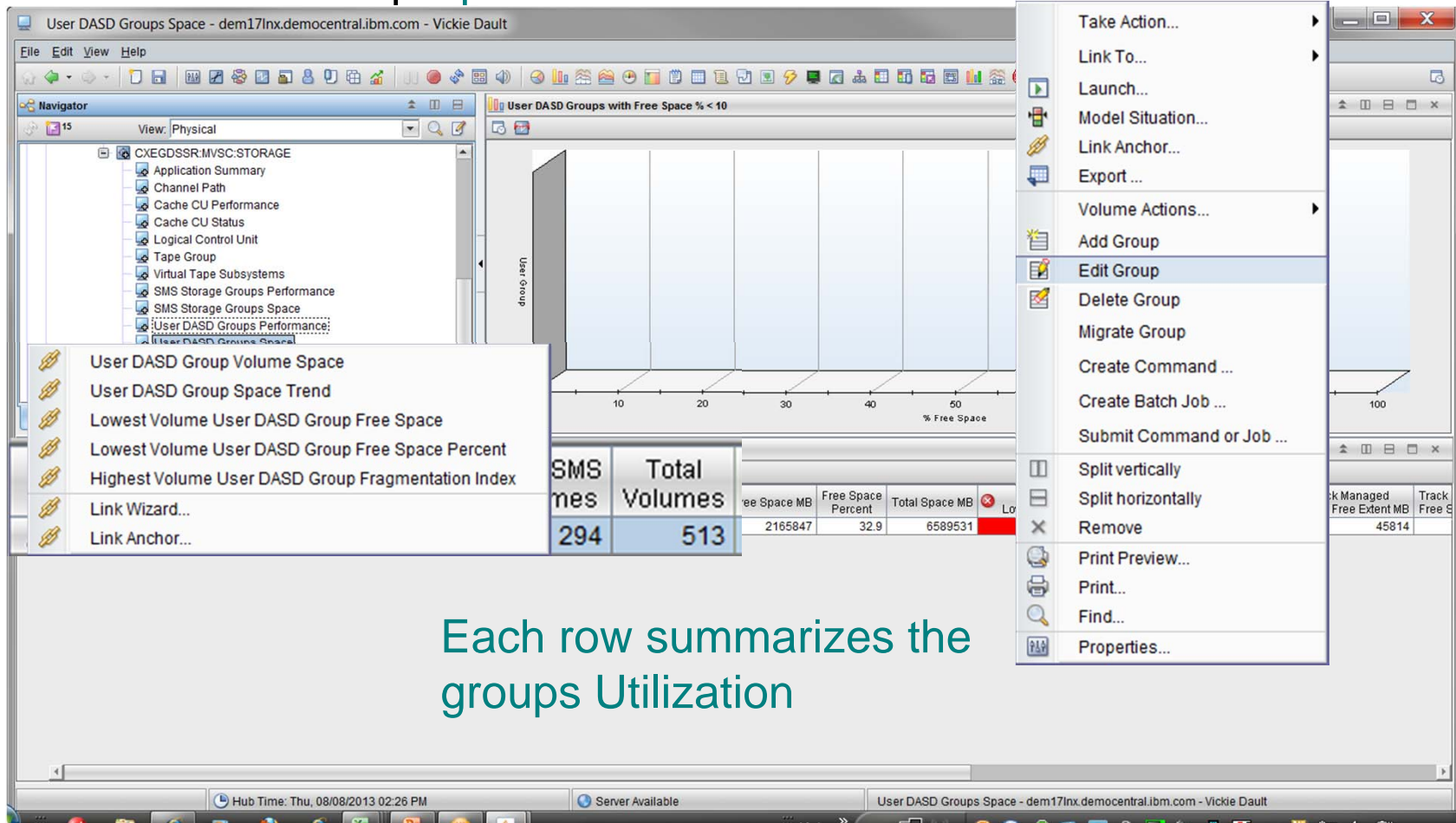
Is the Low Volume Free space of Total Free Space Percent within your thresholds

Monitoring with Existing Workspaces

User DASD Group Space | Performance

Monitoring using Existing Workspaces

- User DASD Group **Space**



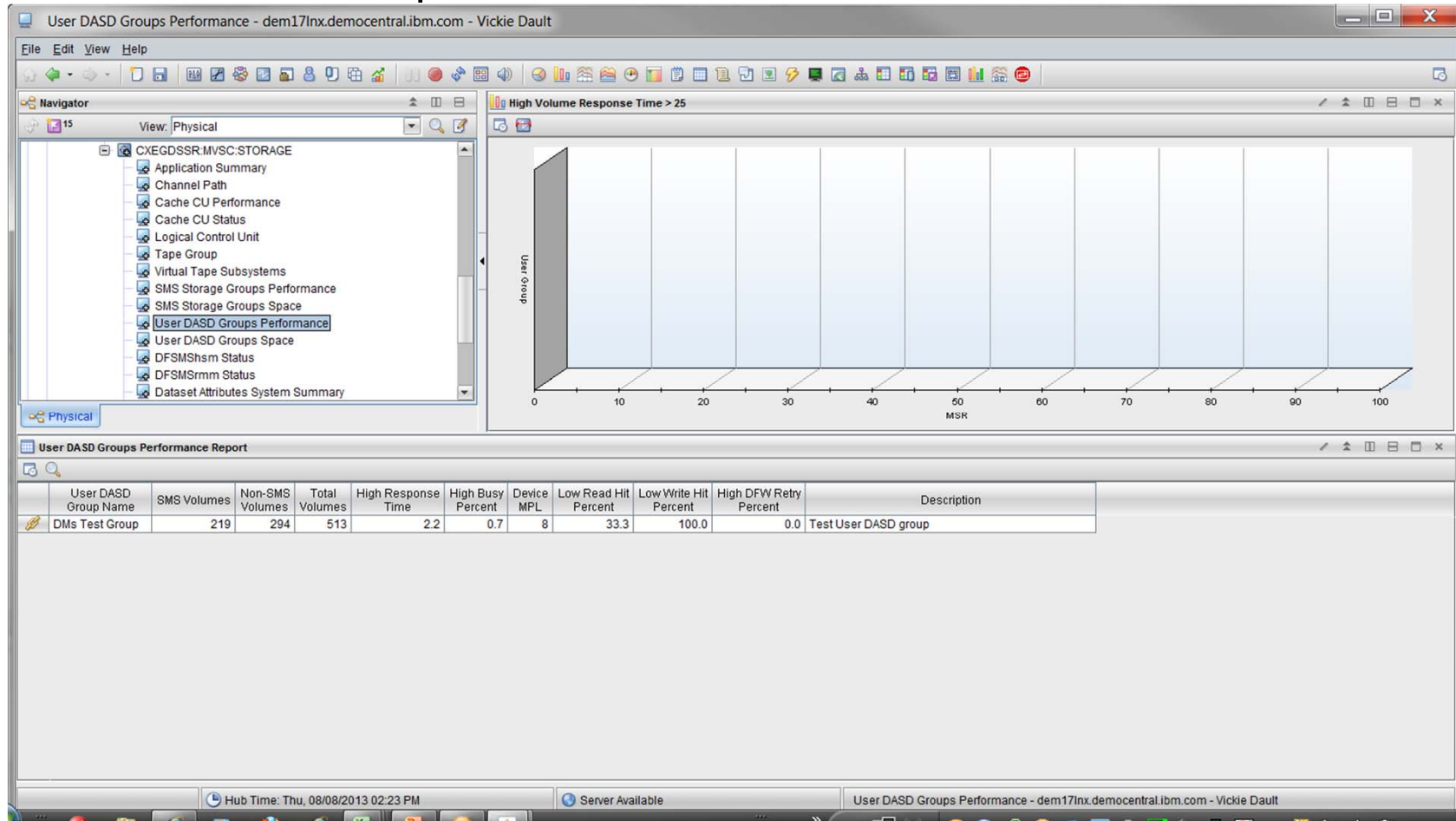
The screenshot displays the 'User DASD Groups Space' workspace. The main area features a bar chart showing '% Free Space' for various groups. Below the chart is a table summarizing group utilization:

SMS Volumes	Total Volumes	Free Space MB	Free Space Percent	Total Space MB
294	513	2165847	32.9	6589531

Each row summarizes the groups Utilization

Monitoring using Existing Workspaces

- User DASD Group Performance

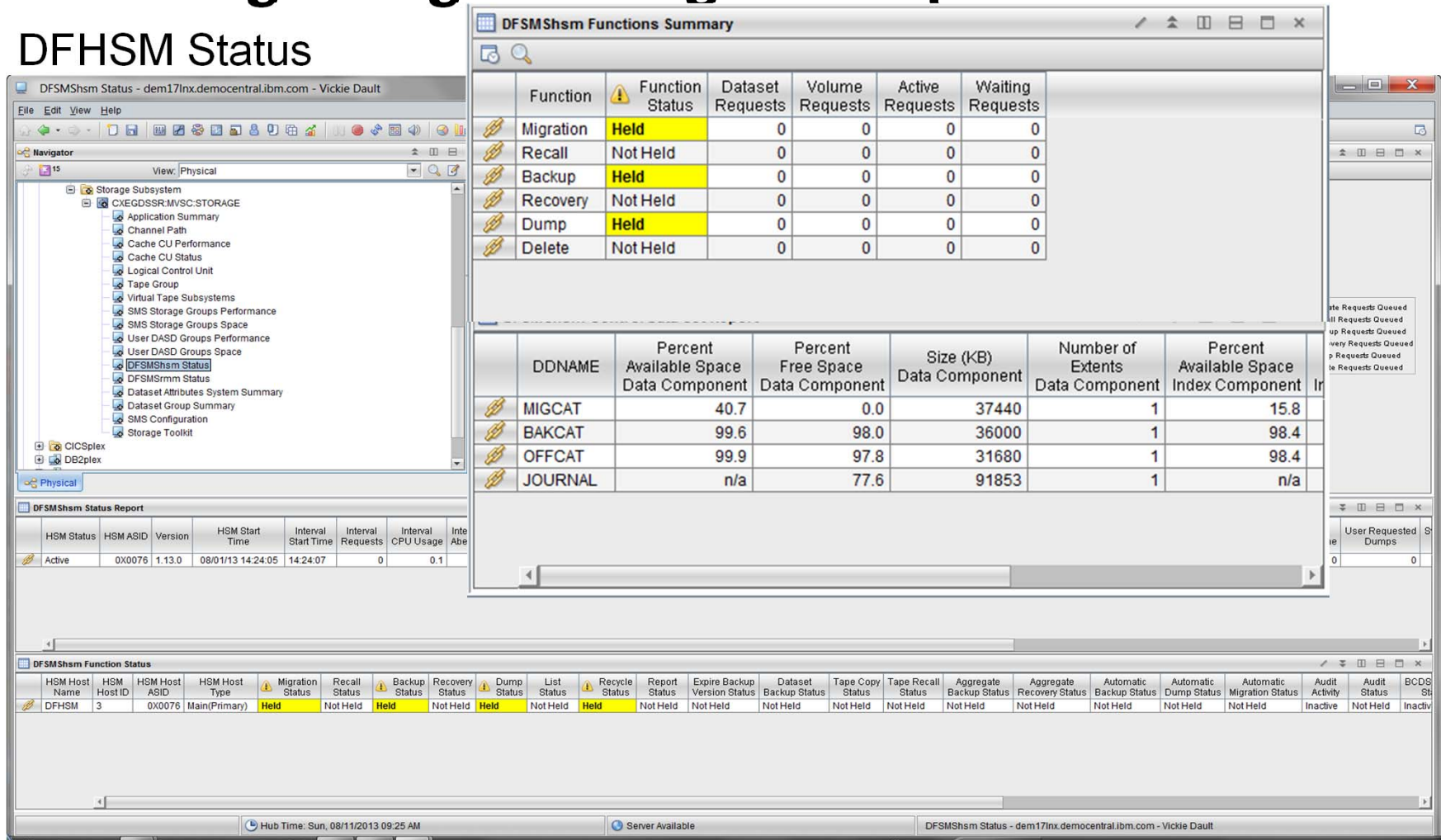


Monitoring with Existing Workspaces

DFHSM Status

Monitoring using Existing Workspaces

- DFHSM Status



The screenshot displays the DFSMShsm monitoring interface with several key windows:

- DFSMSHsm Functions Summary:** A table showing the status of various functions.

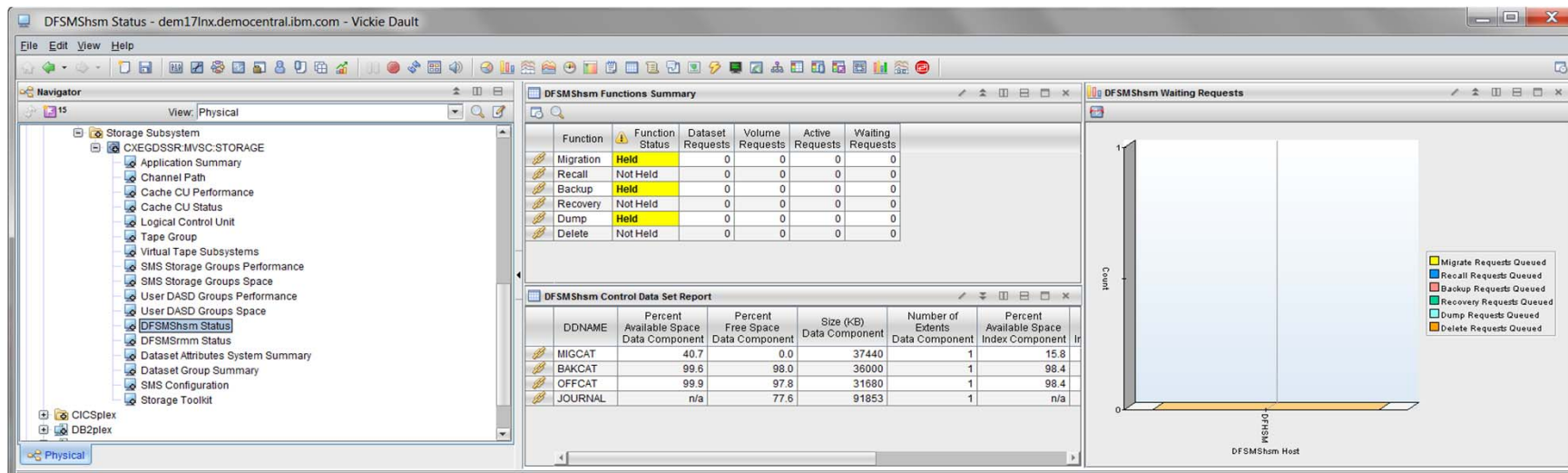
Function	Function Status	Dataset Requests	Volume Requests	Active Requests	Waiting Requests
Migration	Held	0	0	0	0
Recall	Not Held	0	0	0	0
Backup	Held	0	0	0	0
Recovery	Not Held	0	0	0	0
Dump	Held	0	0	0	0
Delete	Not Held	0	0	0	0
- DFSMSHsm Status Report:** A table providing details about the HSM status.

HSM Status	HSM ASID	Version	HSM Start Time	Interval Start Time	Interval Requests	Interval CPU Usage	Inte Abe
Active	0X0076	1.13.0	08/01/13 14:24:05	14:24:07	0	0.1	
- DFSMSHsm Function Status:** A detailed table showing the status of various HSM functions.

HSM Host Name	HSM Host ID	HSM Host ASID	HSM Host Type	Migration Status	Recall Status	Backup Status	Recovery Status	Dump Status	List Status	Recycle Status	Report Status	Expire Backup Version Status	Dataset Backup Status	Tape Copy Status	Tape Recall Status	Aggregate Backup Status	Aggregate Recovery Status	Automatic Backup Status	Automatic Dump Status	Automatic Migration Status	Audit Activity	Audit Status	BCDS St
DFHSM	3	0X0076	Main(Primary)	Held	Not Held	Held	Not Held	Held	Not Held	Held	Not Held	Not Held	Not Held	Not Held	Not Held	Not Held	Not Held	Not Held	Not Held	Not Held	Inactive	Not Held	Inactiv

Monitoring using Existing Workspaces

- DFHSM Status



The screenshot shows the DFSMShsm Status application interface. It includes a Navigator on the left, a central pane with several reports, and a Waiting Requests chart on the right.

DFSMShsm Functions Summary

Function	Function Status	Dataset Requests	Volume Requests	Active Requests	Waiting Requests
Migration	Held	0	0	0	0
Recall	Not Held	0	0	0	0
Backup	Held	0	0	0	0
Recovery	Not Held	0	0	0	0
Dump	Held	0	0	0	0
Delete	Not Held	0	0	0	0

DFSMShsm Control Data Set Report

DDNAME	Percent Available Space Data Component	Percent Free Space Data Component	Size (K-E) Data Component	Number of Extents Data Component	Percent Available Space Index Component
MIGCAT	40.7	0.0	37440	1	15.8
BAKCAT	99.6	98.0	36000	1	98.4
OFFCAT	99.9	97.8	31680	1	98.4
JOURNAL	n/a	77.6	91853	1	n/a

DFSMShsm Waiting Requests

The chart shows a bar for 'MIGRATE' requests, which is significantly higher than other request types. The legend includes: Migrate Requests Queued, Recall Requests Queued, Backup Requests Queued, Recovery Requests Queued, Dump Requests Queued, and Delete Requests Queued.

HSMplex CRQplex Details Report

CRQplex Base Name	HSM Hosts Connected	HSM Hosts Not Connected	Current Entries	Maximum Entries	Entry Percent Full	Current Elements	Maximum Elements	Element Percent Full	Queued Requests	Active Requests	Total Requests	Oldest Request Age
DFHSM	3	0	0	0	0%	0	0	0%	0	0	0	0

DFSMShsm Function Status

HSM Host Name	HSM Host ID	HSM Host ASID	HSM Host Type	Migration Status	Recall Status	Backup Status	Recovery Status	Dump Status	List Status	Recycle Status	Report Status	Expire Backup Version Status	Dataset Backup Status	Tape Copy Status	Tape Recall Status	Aggregate Backup Status	Aggregate Recovery Status	Automatic Backup Status	Automatic Dump Status	Automatic Migration Status	Audit Activity	Audit Status	BCDS St
DFHSM	3	0X0076	Main(Primary)	Held	Not Held	Held	Not Held	Held	Not Held	Held	Not Held	Not Held	Not Held	Not Held	Not Held	Not Held	Not Held	Not Held	Not Held	Not Held	Inactive	Not Held	Inactiv

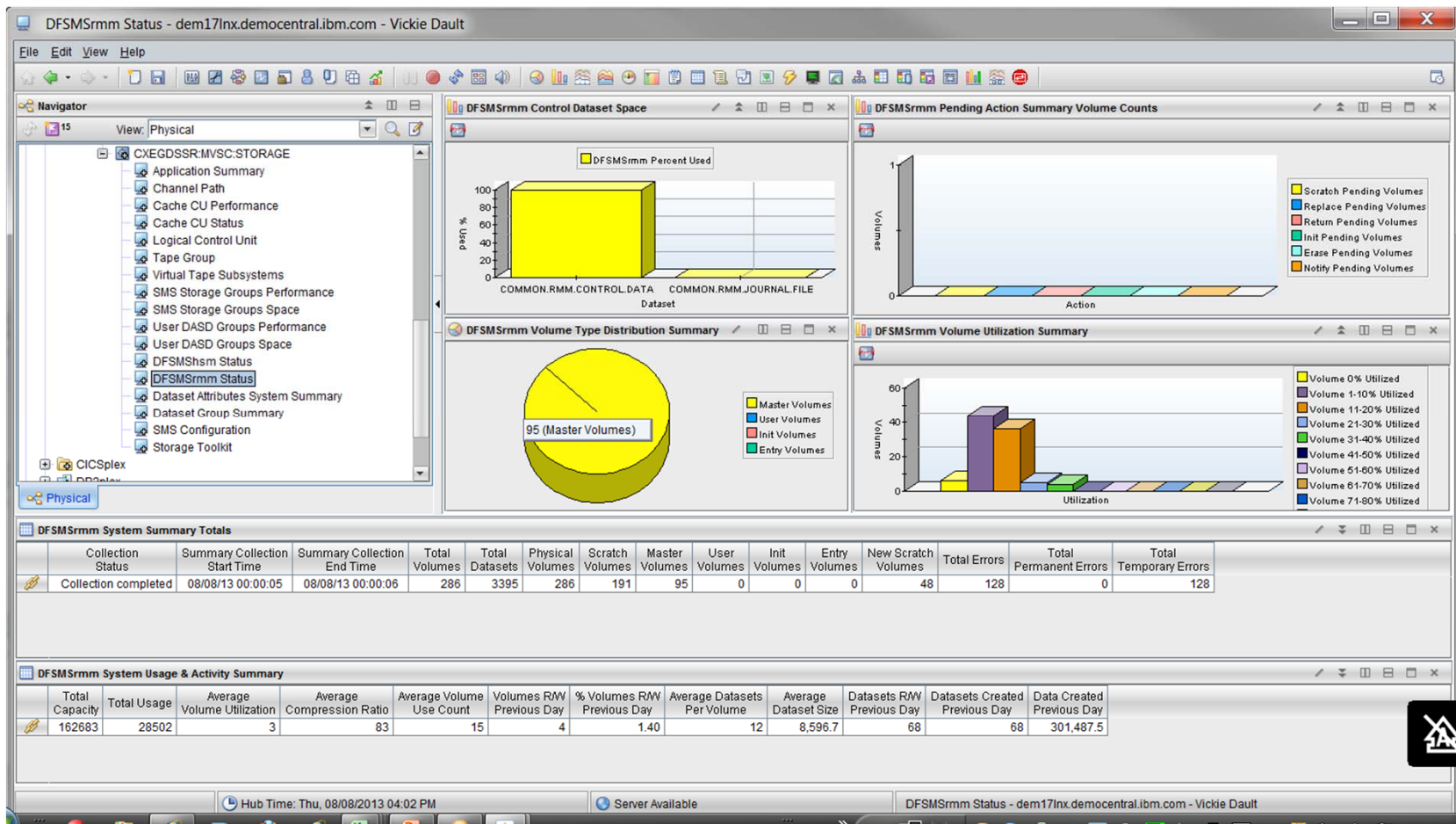
Hub Time: Sun, 08/11/2013 09:25 AM | Server Available | DFSMShsm Status - dem17inx.democentral.ibm.com - Vickie Dault

Monitoring with Existing Workspaces

DFRMM Status

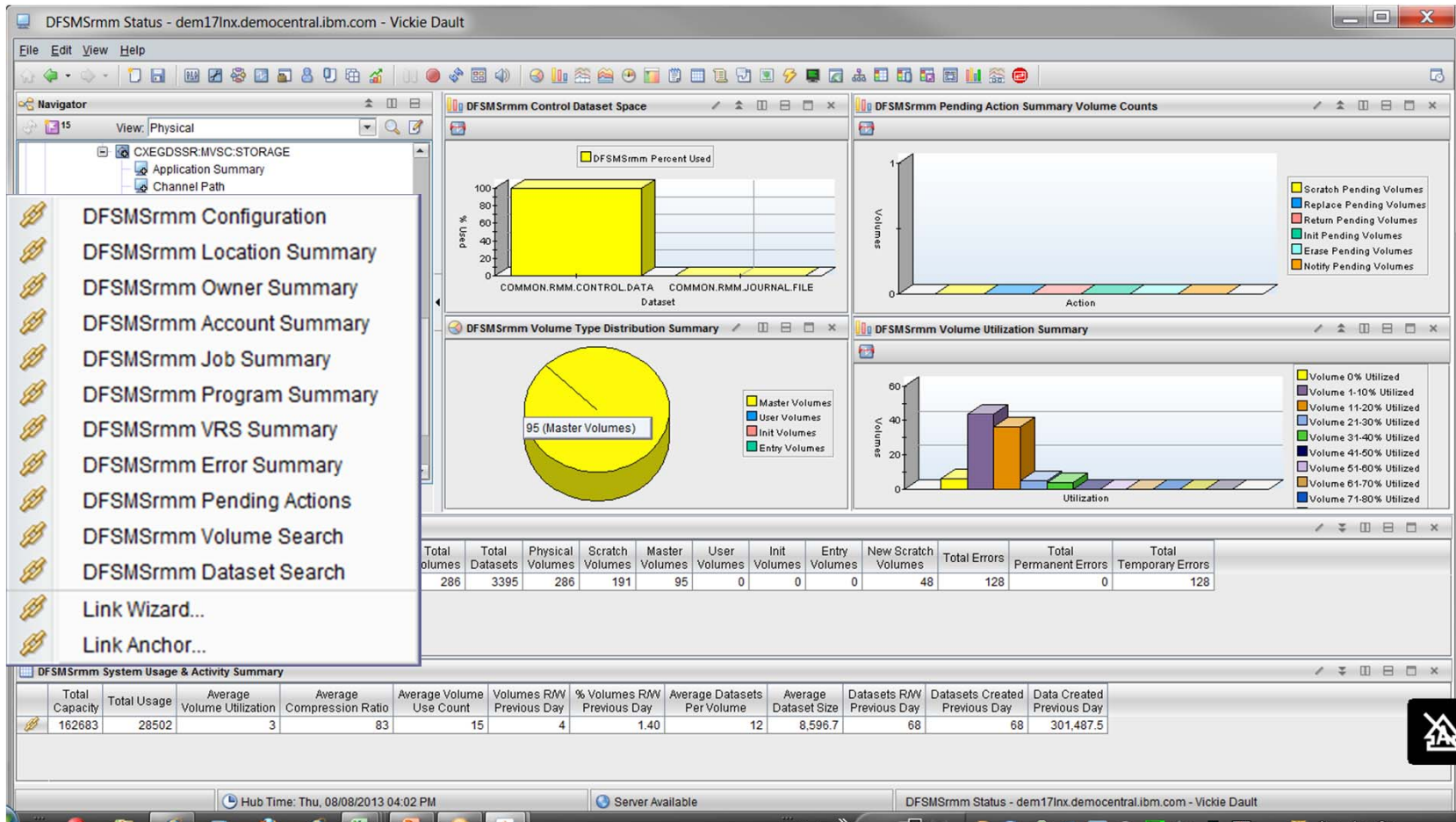
Monitoring using Existing Workspaces

- DFRMM Status



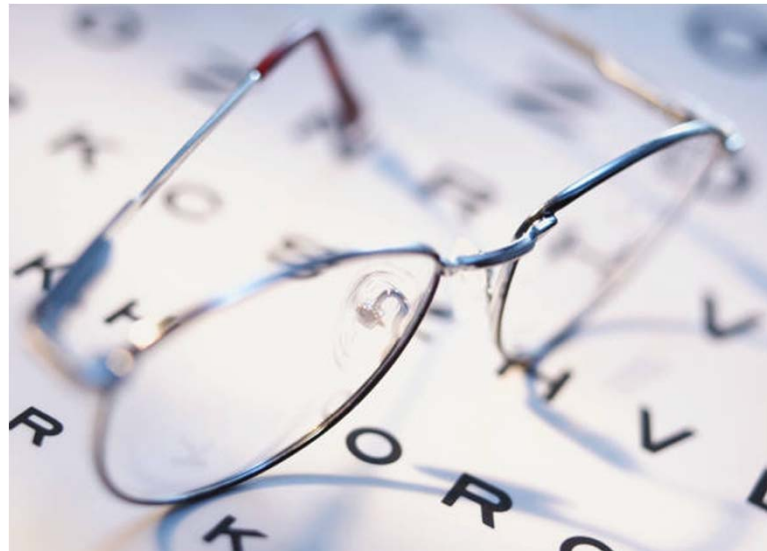
Monitoring using Existing Workspaces

- DFRMM Status



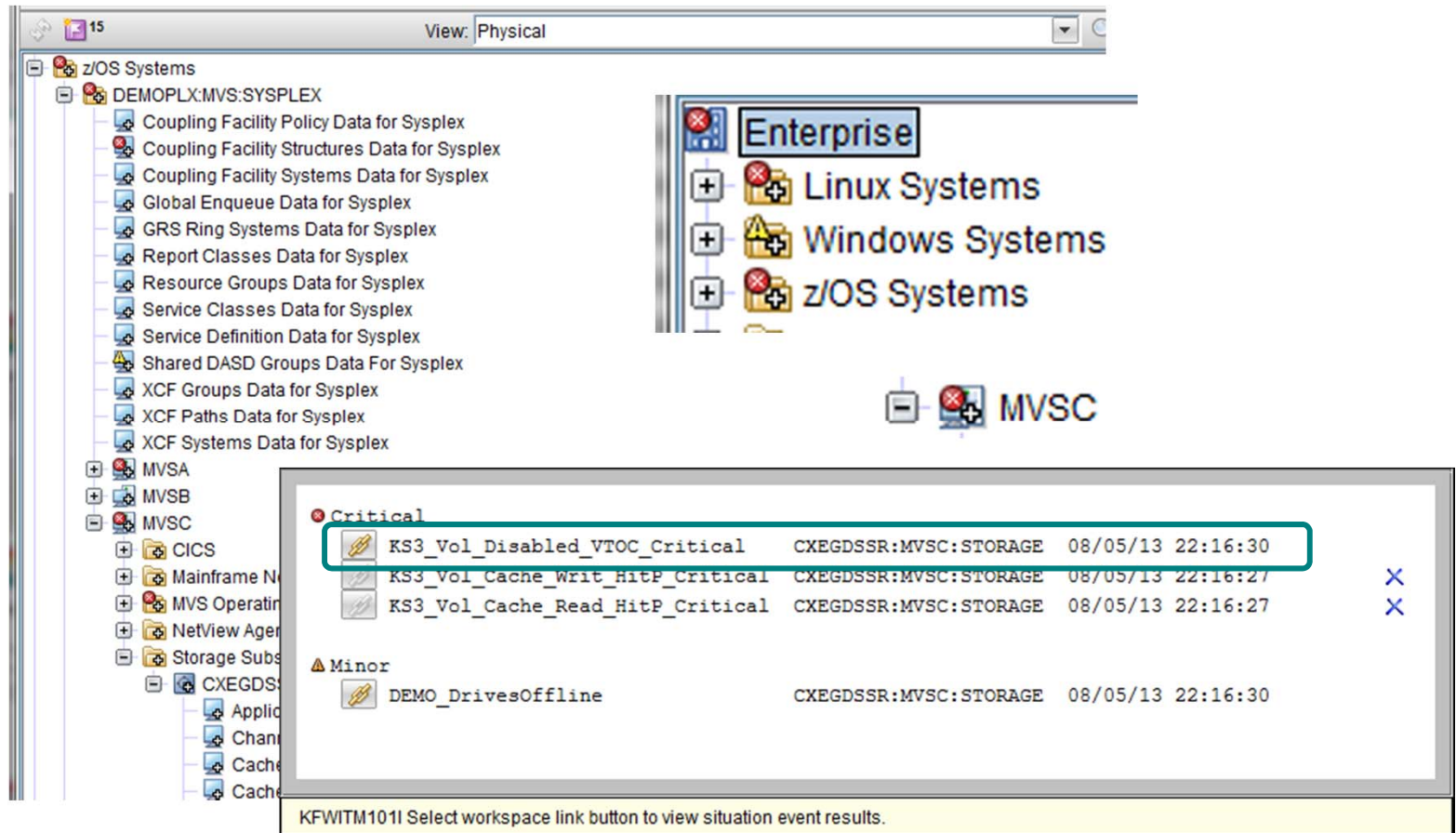
Visual Indicators

Thresholds and Alerts



Visual Indicators

- Event Indicators Alerts



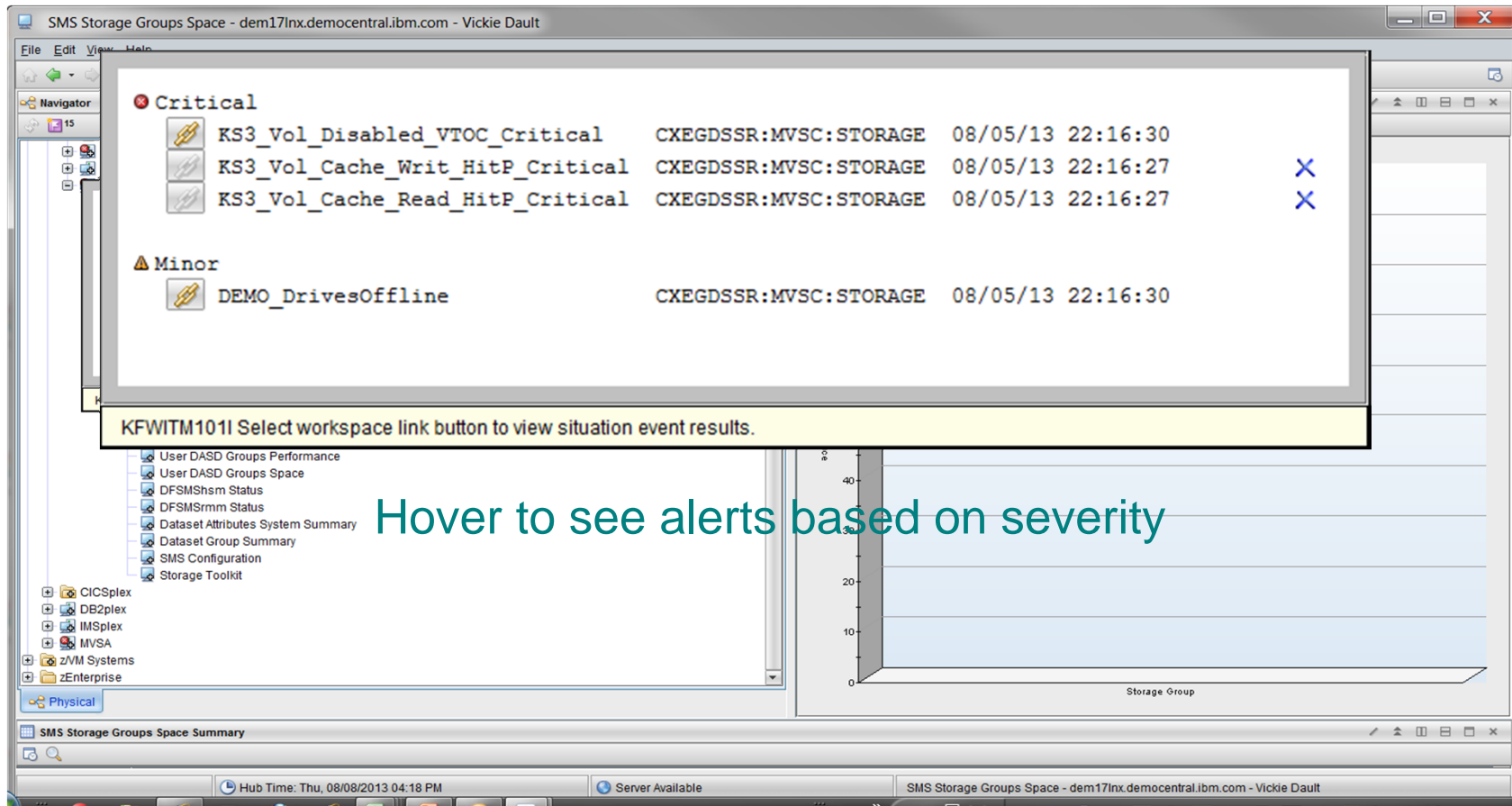
The screenshot displays a monitoring application interface. On the left is a tree view under 'z/OS Systems' with a sub-entry 'DEMOPLX:MVS:SYSPLEX' containing various data categories. On the right, a summary panel titled 'Enterprise' shows expandable sections for 'Linux Systems', 'Windows Systems', and 'z/OS Systems', with a 'MVSC' indicator below. A pop-up window shows a list of events:

Severity	Event Name	Source	Timestamp	Action
Critical	KS3_Vol_Disabled_VTOC_Critical	CXEGDSSR:MVSC:STORAGE	08/05/13 22:16:30	
Critical	KS3_Vol_Cache_Write_HitP_Critical	CXEGDSSR:MVSC:STORAGE	08/05/13 22:16:27	X
Critical	KS3_Vol_Cache_Read_HitP_Critical	CXEGDSSR:MVSC:STORAGE	08/05/13 22:16:27	X
Minor	DEMO_DrivesOffline	CXEGDSSR:MVSC:STORAGE	08/05/13 22:16:30	

At the bottom of the event log window, a yellow banner contains the text: 'KFWITM101I Select workspace link button to view situation event results.'

Visual Indicators

- Event Indicators Alerts



SMS Storage Groups Space - dem17Inx.democentral.ibm.com - Vickie Dault

File Edit View Help

Navigator

15

Critical

	KS3_Vol_Disabled_VTOC_Critical	CXEGDSSR:MVSC:STORAGE	08/05/13 22:16:30	
	KS3_Vol_Cache_Writ_HitP_Critical	CXEGDSSR:MVSC:STORAGE	08/05/13 22:16:27	X
	KS3_Vol_Cache_Read_HitP_Critical	CXEGDSSR:MVSC:STORAGE	08/05/13 22:16:27	X

Minor

	DEMO_DrivesOffline	CXEGDSSR:MVSC:STORAGE	08/05/13 22:16:30	
--	--------------------	-----------------------	-------------------	--

KFWITM101I Select workspace link button to view situation event results.

User DASD Groups Performance
 User DASD Groups Space
 DFSMSshm Status
 DFSMSrmm Status
 Dataset Attributes System Summary
 Dataset Group Summary
 SMS Configuration
 Storage Toolkit

CICSplex
 DB2plex
 IMSplex
 MVSA

z/VM Systems
 zEnterprise

Physical

SMS Storage Groups Space Summary

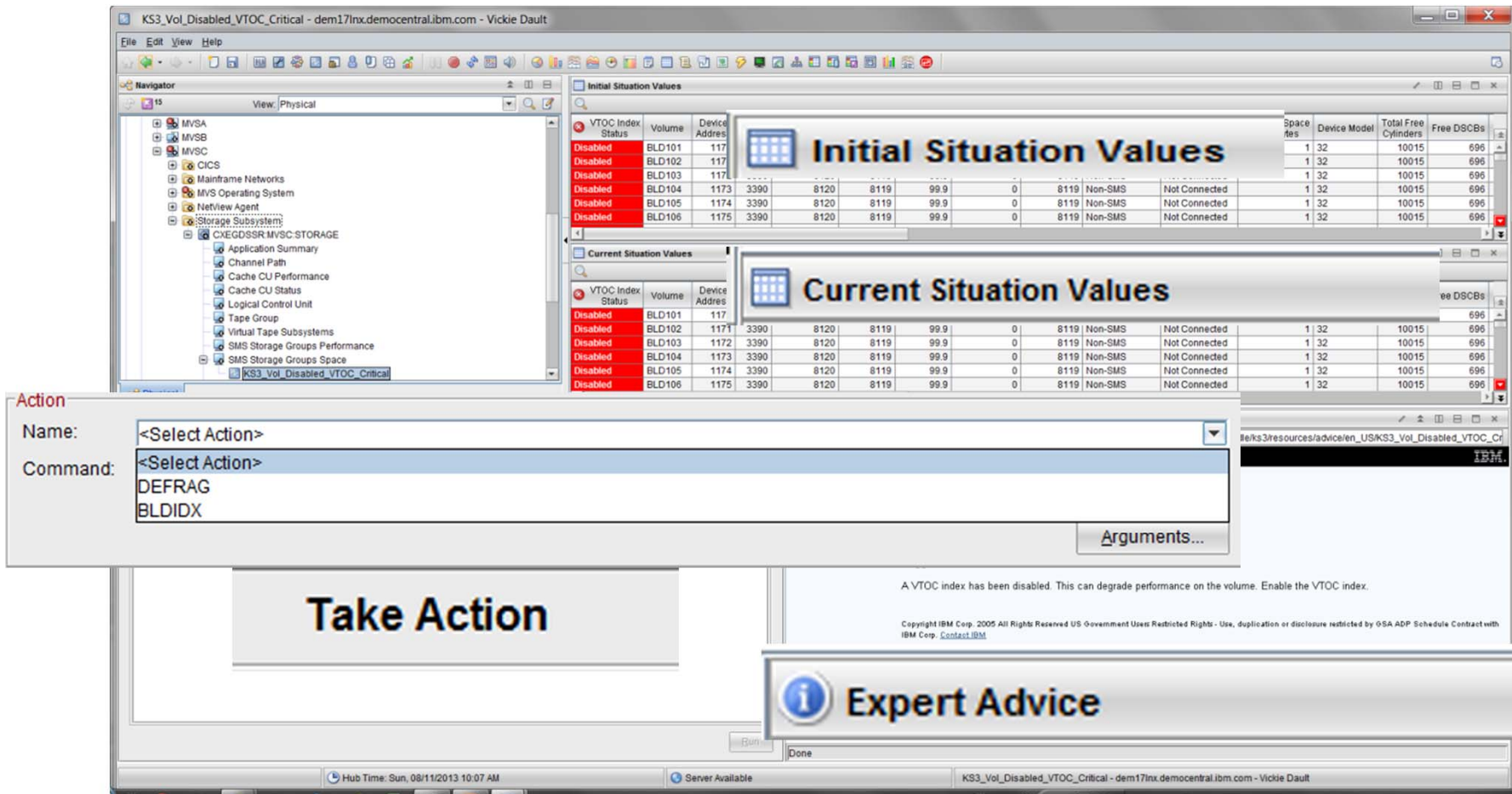
Hub Time: Thu, 08/08/2013 04:18 PM Server Available SMS Storage Groups Space - dem17Inx.democentral.ibm.com - Vickie Dault

Storage Group

Hover to see alerts based on severity

Visual Indicators

- Event Indicators **Situation Event Console**



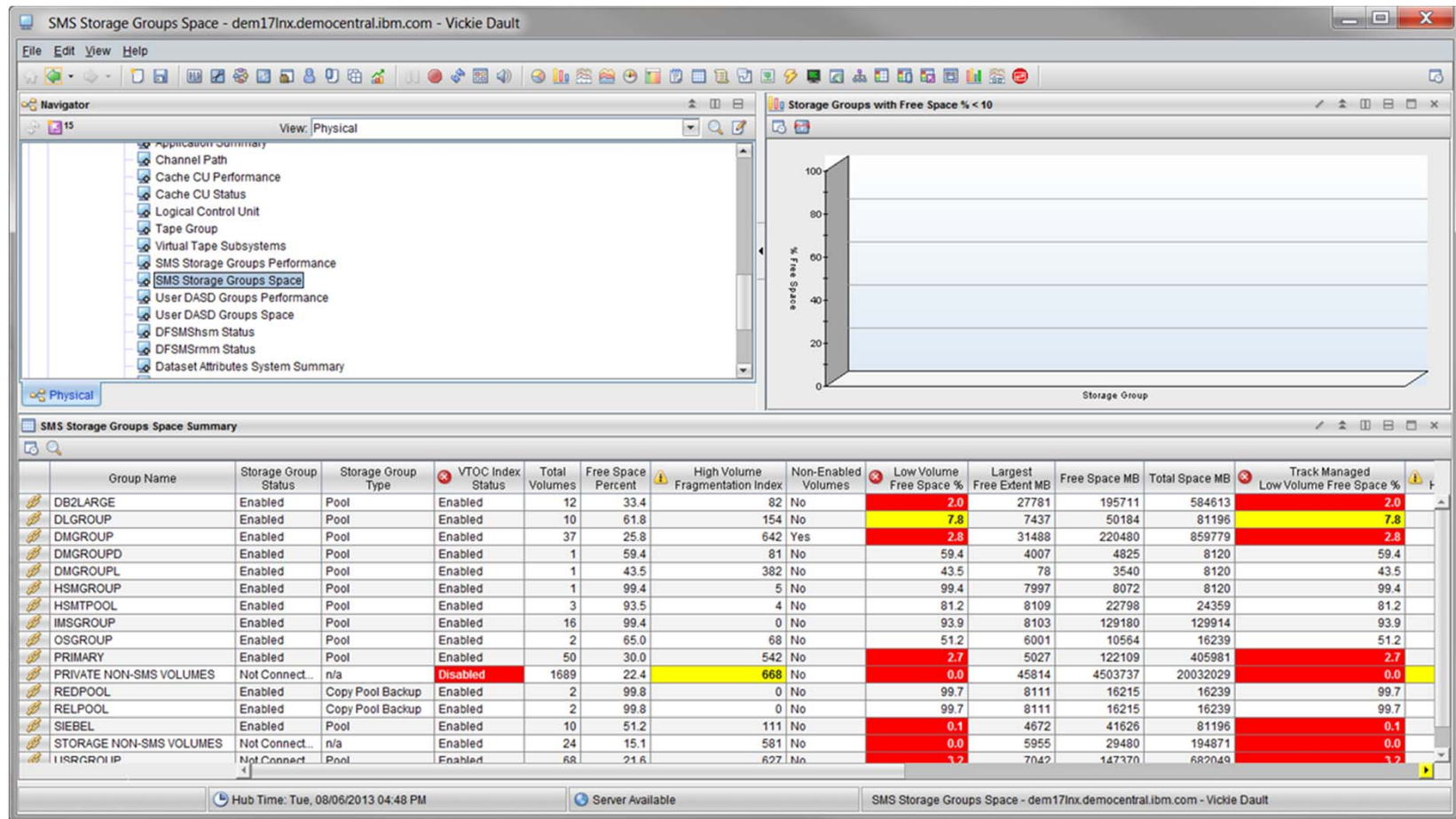
The screenshot displays the Situation Event Console interface. On the left is a Navigator tree showing a physical view of storage resources. The main area contains two tables: 'Initial Situation Values' and 'Current Situation Values'. Both tables show a 'Disabled' status for VTOC Index on volumes BLD101 through BLD106. Below these tables is an 'Action' panel with a dropdown menu for selecting actions like 'DEFRAG' and 'BLDIDX'. An 'Expert Advice' notification is visible at the bottom, stating: 'A VTOC index has been disabled. This can degrade performance on the volume. Enable the VTOC index.'

VTOC Index Status	Volume	Device Address	Space Res	Device Model	Total Free Cylinders	Free DSCBs								
Disabled	BLD101	117	1	32	10015	696								
Disabled	BLD102	117	1	32	10015	696								
Disabled	BLD103	117	1	32	10015	696								
Disabled	BLD104	1173	3390	8120	8119	99.9	0	8119	Non-SMS	Not Connected	1	32	10015	696
Disabled	BLD105	1174	3390	8120	8119	99.9	0	8119	Non-SMS	Not Connected	1	32	10015	696
Disabled	BLD106	1175	3390	8120	8119	99.9	0	8119	Non-SMS	Not Connected	1	32	10015	696

VTOC Index Status	Volume	Device Address	Space Res	Device Model	Total Free Cylinders	Free DSCBs								
Disabled	BLD101	117	1	32	10015	696								
Disabled	BLD102	1171	3390	8120	8119	99.9	0	8119	Non-SMS	Not Connected	1	32	10015	696
Disabled	BLD103	1172	3390	8120	8119	99.9	0	8119	Non-SMS	Not Connected	1	32	10015	696
Disabled	BLD104	1173	3390	8120	8119	99.9	0	8119	Non-SMS	Not Connected	1	32	10015	696
Disabled	BLD105	1174	3390	8120	8119	99.9	0	8119	Non-SMS	Not Connected	1	32	10015	696
Disabled	BLD106	1175	3390	8120	8119	99.9	0	8119	Non-SMS	Not Connected	1	32	10015	696

Visual Indicators

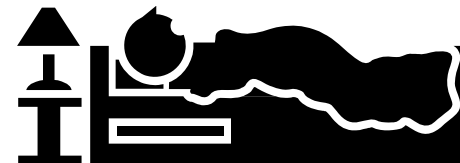
- Thresholds



Situations



Situations



Situations

Automated monitoring

At regular **intervals**

Formula attribute eq ne > < '*value*'

AND | OR





Distribution (which system)

Action (Do something)

Inform - Event Indicator Event Forwarding

Situations

After selecting or creating a situation, click:

-  [Formula](#) to see, add attributes to, and edit the formula.
-  [Distribution](#) to see and assign the managed systems where the situation is running.
-  [Expert Advice](#) to create links to URLs or to write instructions to be read in the event results workspace.
-  [Action](#) to send a command or a universal message as an automatic, reflexive response when the situation becomes true.

Situations

Formula

fx Formula
Distribution
Expert Advice
Action
EIF
Until

Name

Description

Formula

fx
fx

1	
2	
3	

Formula editor

Click inside a cell of the formula editor to see a description of the attribute for that column and to compose the expression. To add an expression to the formula, take one of the following actions:

- If you are editing a situation, click **Add conditions**. You can select more attributes or select a situation to embed in the formula. When adding another attribute or situation to a situation formula, enter the second expression in the same row to create an AND condition or in a separate row to create an OR condition.

Situation Formula Capacity Add conditions... Advanced...

Sampling interval

/ : :

ddd hh mm ss

Sound

Enable critical.wav

Play Edit...

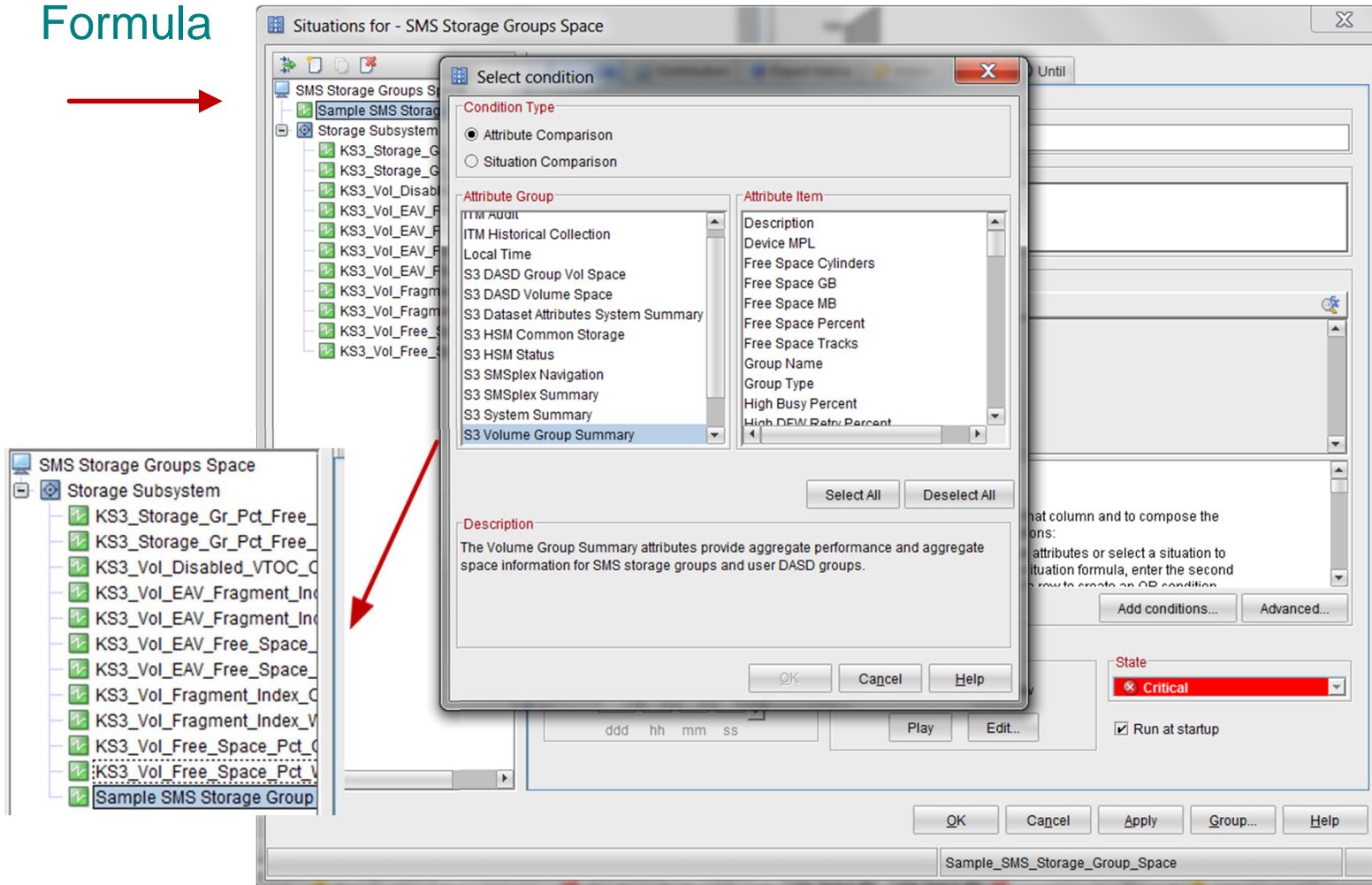
State

Critical

Run at startup

Situations

Formula

Select condition

Condition Type

- Attribute Comparison
- Situation Comparison

Attribute Group	Attribute Item
ITM Audit	Description
ITM Historical Collection	Device MPL
Local Time	Free Space Cylinders
S3 DASD Group Vol Space	Free Space GB
S3 DASD Volume Space	Free Space MB
S3 Dataset Attributes System Summary	Free Space Percent
S3 HSM Common Storage	Free Space Tracks
S3 HSM Status	Group Name
S3 SMSplex Navigation	Group Type
S3 SMSplex Summary	High Busy Percent
S3 System Summary	High DEFW Ratio Percent
S3 Volume Group Summary	

Select All Deselect All

Description

The Volume Group Summary attributes provide aggregate performance and aggregate space information for SMS storage groups and user DASD groups.

OK Cancel Help

State: **Critical**

Run at startup

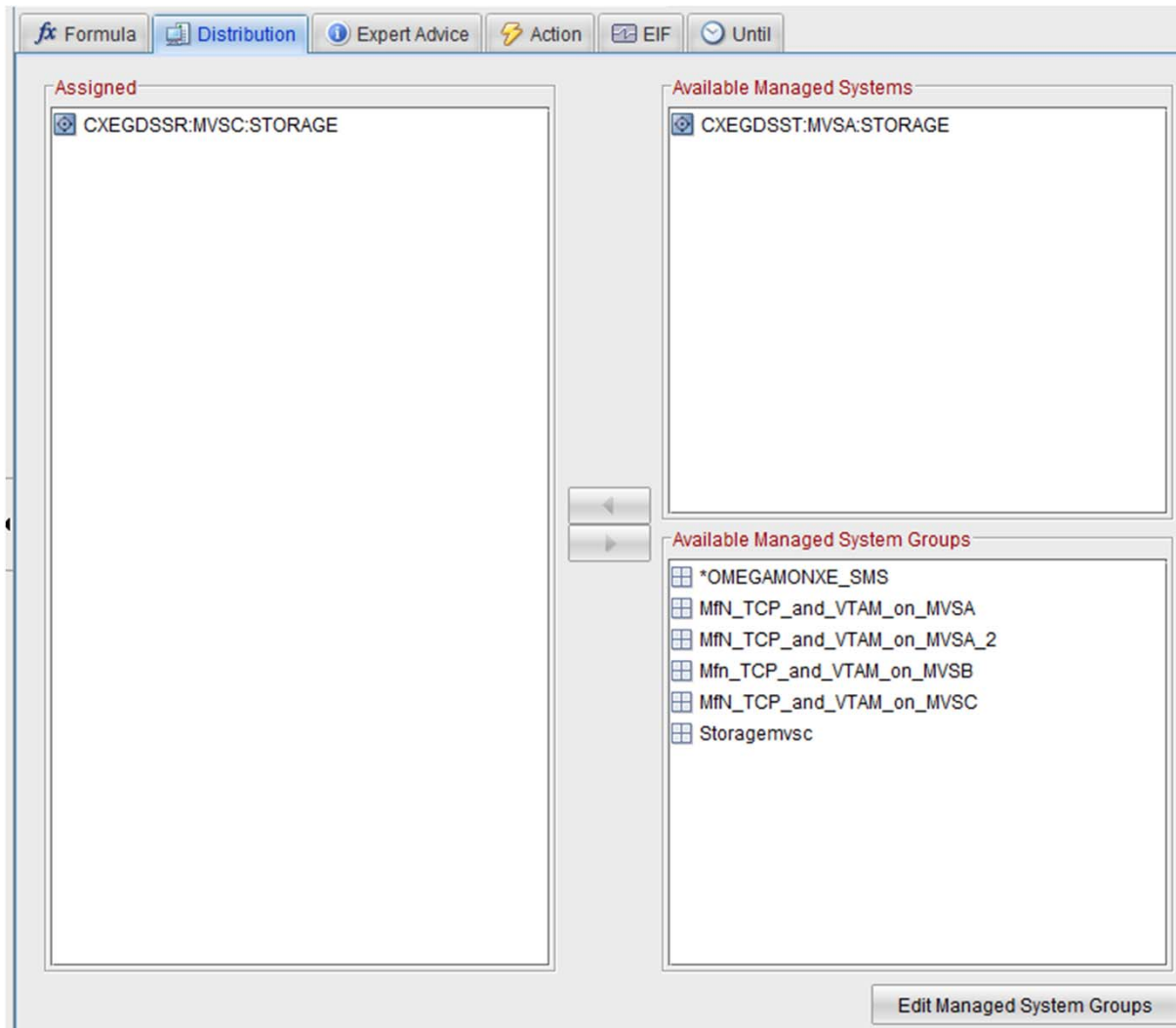
Play Edit...

OK Cancel Apply Group... Help

Sample_SMS_Storage_Group_Space

Situations

Distribution



Formula Distribution Expert Advice Action EIF Until

Assigned

- CXEGDSSR:MVSC:STORAGE

Available Managed Systems

- CXEGDSST:MVSA:STORAGE

Available Managed System Groups

- *OMEGAMONXE_SMS
- Mfn_TCP_and_VTAM_on_MVSA
- Mfn_TCP_and_VTAM_on_MVSA_2
- Mfn_TCP_and_VTAM_on_MVSB
- Mfn_TCP_and_VTAM_on_MVSC
- Storagemvsc

Edit Managed System Groups

Situations

Expert Advice

Formula Distribution Expert Advice Action EIF Until

Text or Advice Location

raw Text

'Expert Advice: Instructions'

or

HTML

<HEAD>

<TITLE> Expert Advice for this Situation <TITLE>

<HEAD>

<H2> INDEX VTOC DISABLED - REBUILD <H2>

<BODY>

Instructions Do This ... Then That... and leave me a note

<BODY>

OR

<http://internal.web.link.htm>

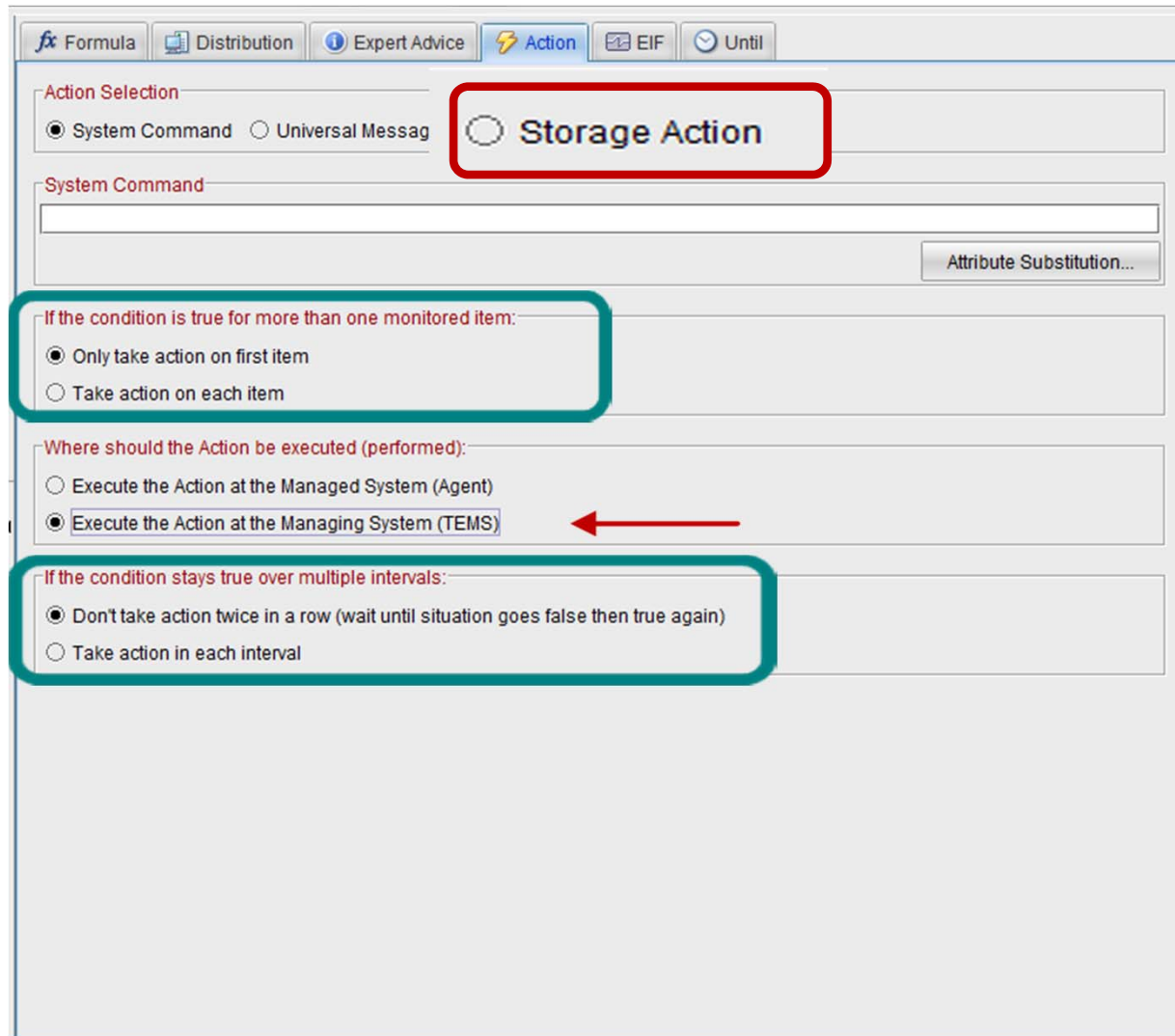
Preview...

Complete your sessions evaluation online at SHARE.org/BostonEval

Situations

Action

Storage
Toolkit
Action



Formula Distribution Expert Advice **Action** EIF Until

Action Selection

System Command Universal Message **Storage Action**

System Command

Attribute Substitution...

If the condition is true for more than one monitored item:

Only take action on first item
 Take action on each item

Where should the Action be executed (performed):

Execute the Action at the Managed System (Agent)
 Execute the Action at the Managing System (TEMS)

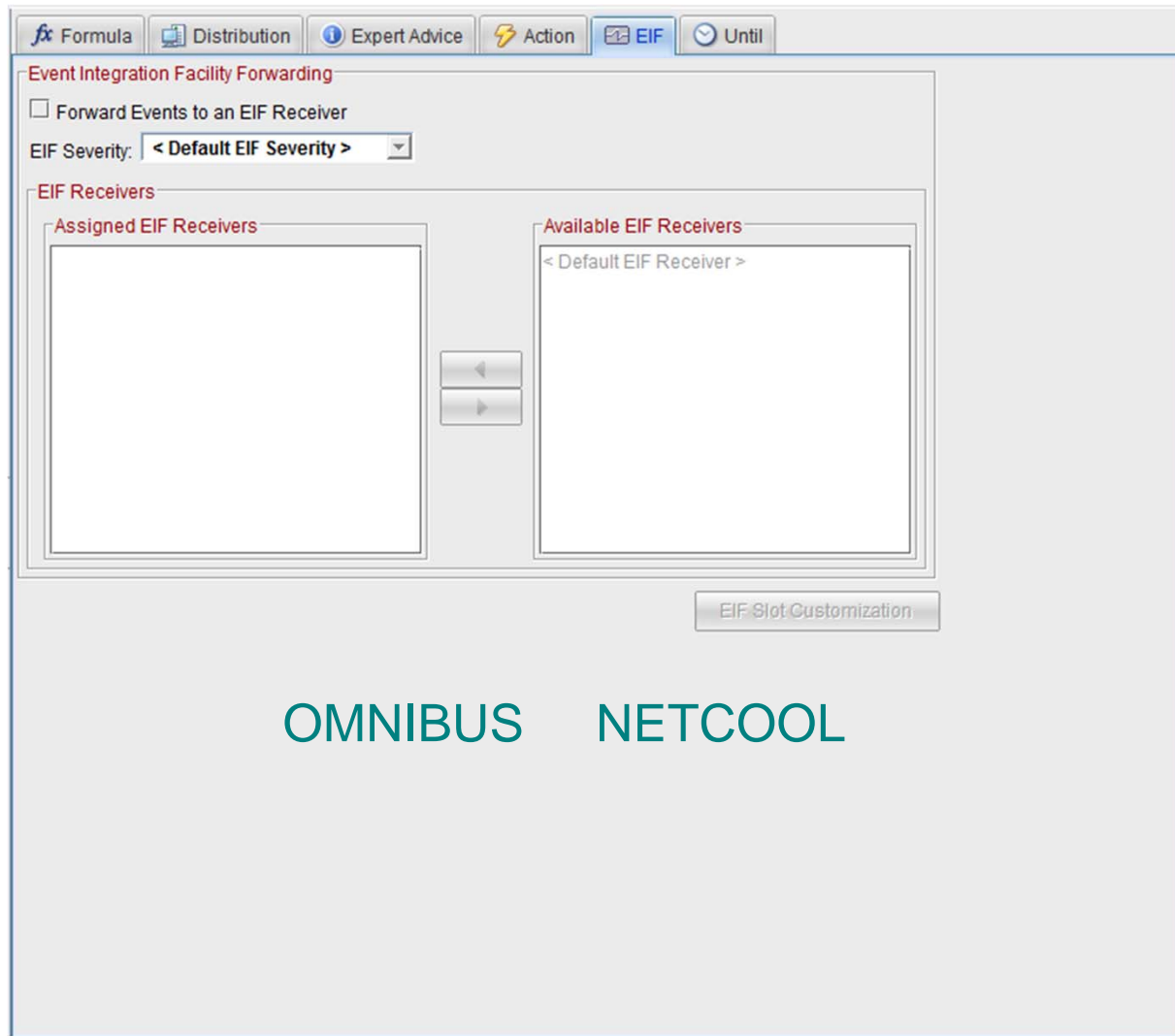
If the condition stays true over multiple intervals:

Don't take action twice in a row (wait until situation goes false then true again)
 Take action in each interval

Complete your sessions evaluation online at [SHARE.org/BostonEval](https://share.org/BostonEval)

Situations

EIF

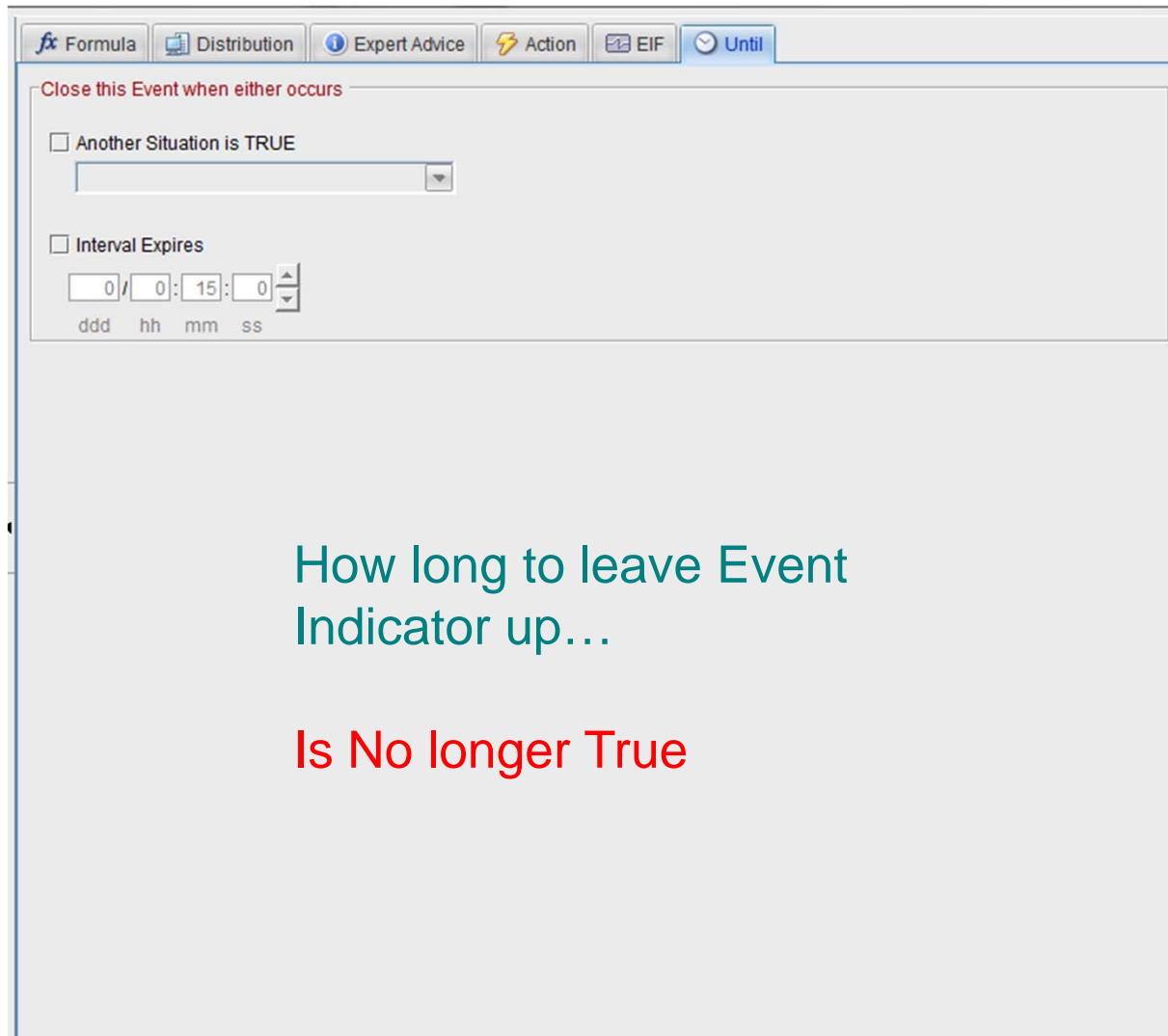


The screenshot shows a software configuration window for Event Integration Facility (EIF). At the top, there is a menu bar with options: Formula, Distribution, Expert Advice, Action, EIF (selected), and Until. Below the menu bar, the main configuration area is titled "Event Integration Facility Forwarding". It contains a checkbox for "Forward Events to an EIF Receiver" which is currently unchecked. Below this is a dropdown menu for "EIF Severity" set to "< Default EIF Severity >". Underneath, there is a section titled "EIF Receivers" which is divided into two panes: "Assigned EIF Receivers" (currently empty) and "Available EIF Receivers" (containing "< Default EIF Receiver >"). Between these panes are two arrow buttons for moving items. At the bottom right of the configuration area is a button labeled "EIF Slot Customization".

OMNIBUS NETCOOL

Situations

Until



Close this Event when either occurs

Another Situation is TRUE

Interval Expires

0 / 0 : 15 : 0
ddd hh mm ss

How long to leave Event Indicator up...

Is No longer True

Situations

Automated monitoring

At regular intervals

Formula **attribute** eq | ne > < 'value'

AND | OR

Distribution (which system)

Action (Do something)

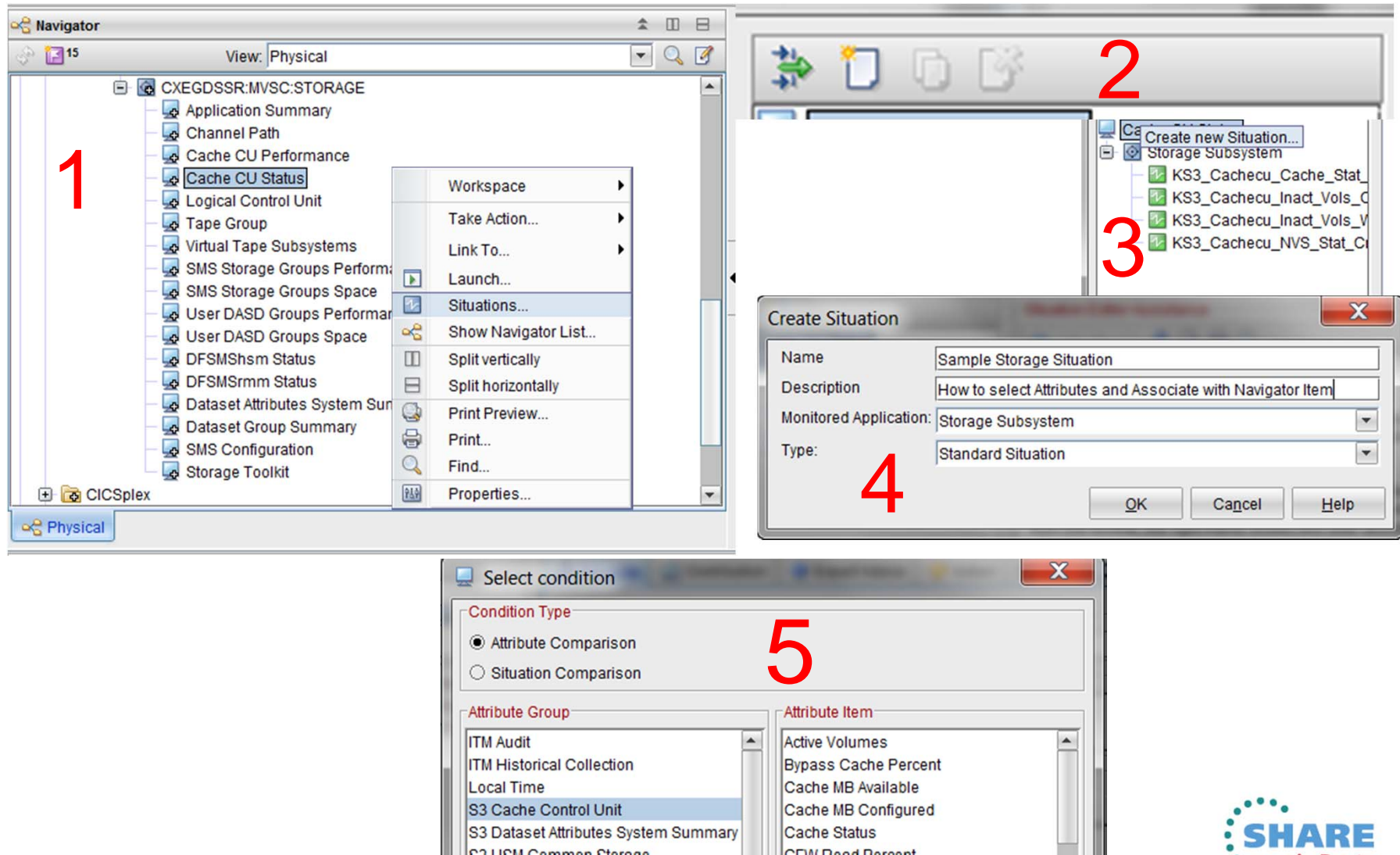
Inform - Event Indicator Event Forwarding

Where are the Attributes?

Situations

Attribute Groups

Situations Attributes by Navigator Item



1 In the Navigator window, the tree view shows the following items:

- CXEGDSSR:MVSC:STORAGE
 - Application Summary
 - Channel Path
 - Cache CU Performance
 - Cache CU Status**
 - 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
 - DFSMSrmm Status
 - Dataset Attributes System Summary
 - Dataset Group Summary
 - SMS Configuration
 - Storage Toolkit

2 The toolbar contains icons for navigation and actions, including a 'Create new Situation...' icon.

3 The 'Create new Situation...' dialog box shows a tree view with the following items:

- Storage Subsystem
 - KS3_Cachecu_Cache_Stat_
 - KS3_Cachecu_Inact_Vols_C
 - KS3_Cachecu_Inact_Vols_V
 - KS3_Cachecu_NV_S_Stat_Cr

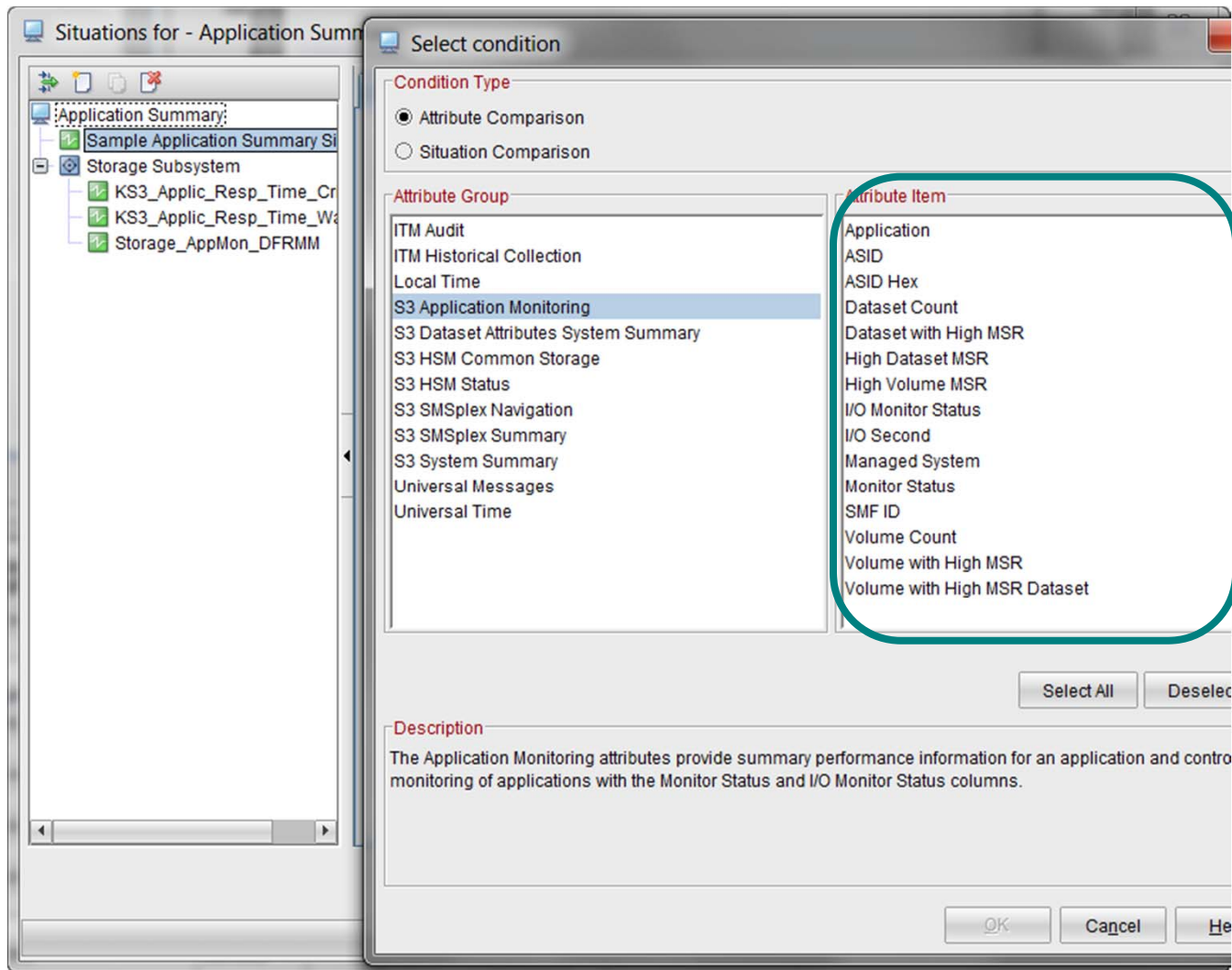
4 The 'Create Situation' dialog box contains the following fields:

- Name: Sample Storage Situation
- Description: How to select Attributes and Associate with Navigator Item
- Monitored Application: Storage Subsystem
- Type: Standard Situation

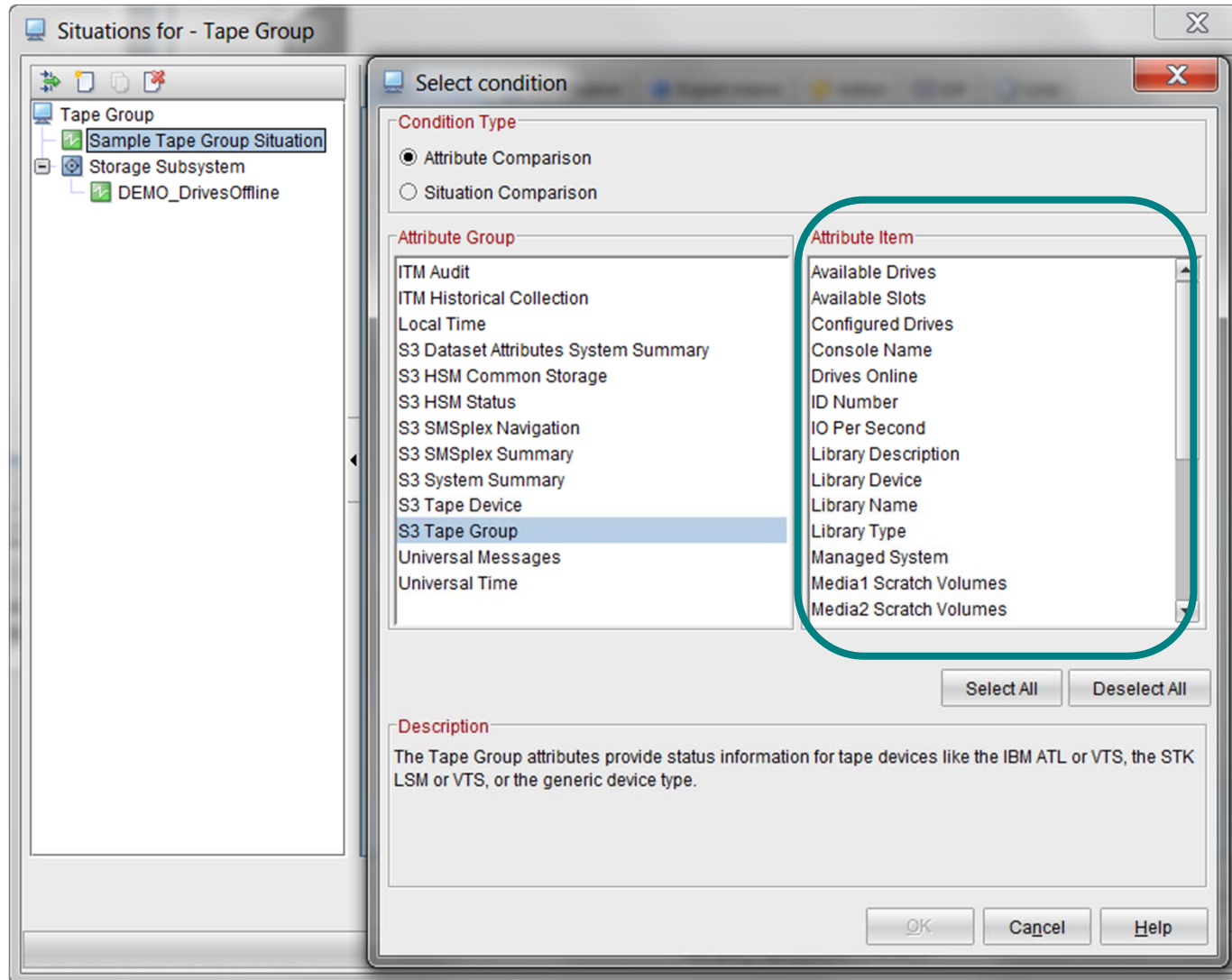
5 The 'Select condition' dialog box shows the following options:

- Condition Type:
 - Attribute Comparison
 - Situation Comparison
- Attribute Group:
 - ITM Audit
 - ITM Historical Collection
 - Local Time
 - S3 Cache Control Unit**
 - S3 Dataset Attributes System Summary
 - S3 URM Common Storage
- Attribute Item:
 - Active Volumes
 - Bypass Cache Percent
 - Cache MB Available
 - Cache MB Configured
 - Cache Status
 - Cache Used Percent

Situations Attribute Groups by Navigator Item



Situations Attribute Groups by Navigator Item



Situations for - Tape Group

Select condition

Condition Type

Attribute Comparison
 Situation Comparison

Attribute Group

- ITM Audit
- ITM Historical Collection
- Local Time
- S3 Dataset Attributes System Summary
- S3 HSM Common Storage
- S3 HSM Status
- S3 SMSplex Navigation
- S3 SMSplex Summary
- S3 System Summary
- S3 Tape Device
- S3 Tape Group**
- Universal Messages
- Universal Time

Attribute Item

- Available Drives
- Available Slots
- Configured Drives
- Console Name
- Drives Online
- ID Number
- IO Per Second
- Library Description
- Library Device
- Library Name
- Library Type
- Managed System
- Media1 Scratch Volumes
- Media2 Scratch Volumes

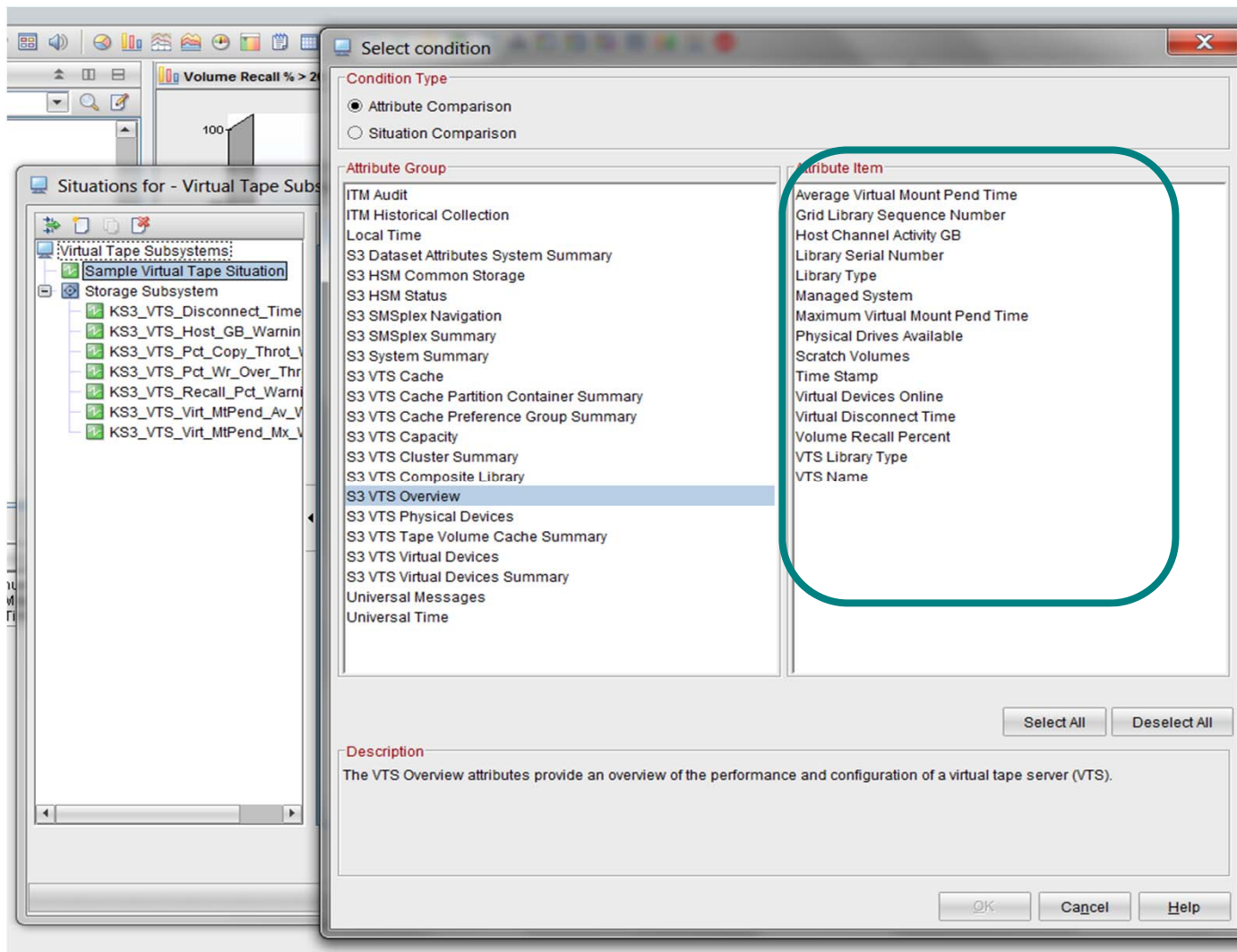
Description

The Tape Group attributes provide status information for tape devices like the IBM ATL or VTS, the STK LSM or VTS, or the generic device type.

Select All Deselect All

OK Cancel Help

Situations Attribute Groups by Navigator Item



Select condition

Condition Type

Attribute Comparison
 Situation Comparison

Attribute Group

- ITM Audit
- ITM Historical Collection
- Local Time
- S3 Dataset Attributes System Summary
- S3 HSM Common Storage
- S3 HSM Status
- S3 SMSplex Navigation
- S3 SMSplex Summary
- S3 System Summary
- S3 VTS Cache
- S3 VTS Cache Partition Container Summary
- S3 VTS Cache Preference Group Summary
- S3 VTS Capacity
- S3 VTS Cluster Summary
- S3 VTS Composite Library
- S3 VTS Overview**
- S3 VTS Physical Devices
- S3 VTS Tape Volume Cache Summary
- S3 VTS Virtual Devices
- S3 VTS Virtual Devices Summary
- Universal Messages
- Universal Time

Attribute Item

- Average Virtual Mount Pend Time
- Grid Library Sequence Number
- Host Channel Activity GB
- Library Serial Number
- Library Type
- Managed System
- Maximum Virtual Mount Pend Time
- Physical Drives Available
- Scratch Volumes
- Time Stamp
- Virtual Devices Online
- Virtual Disconnect Time
- Volume Recall Percent
- VTS Library Type
- VTS Name

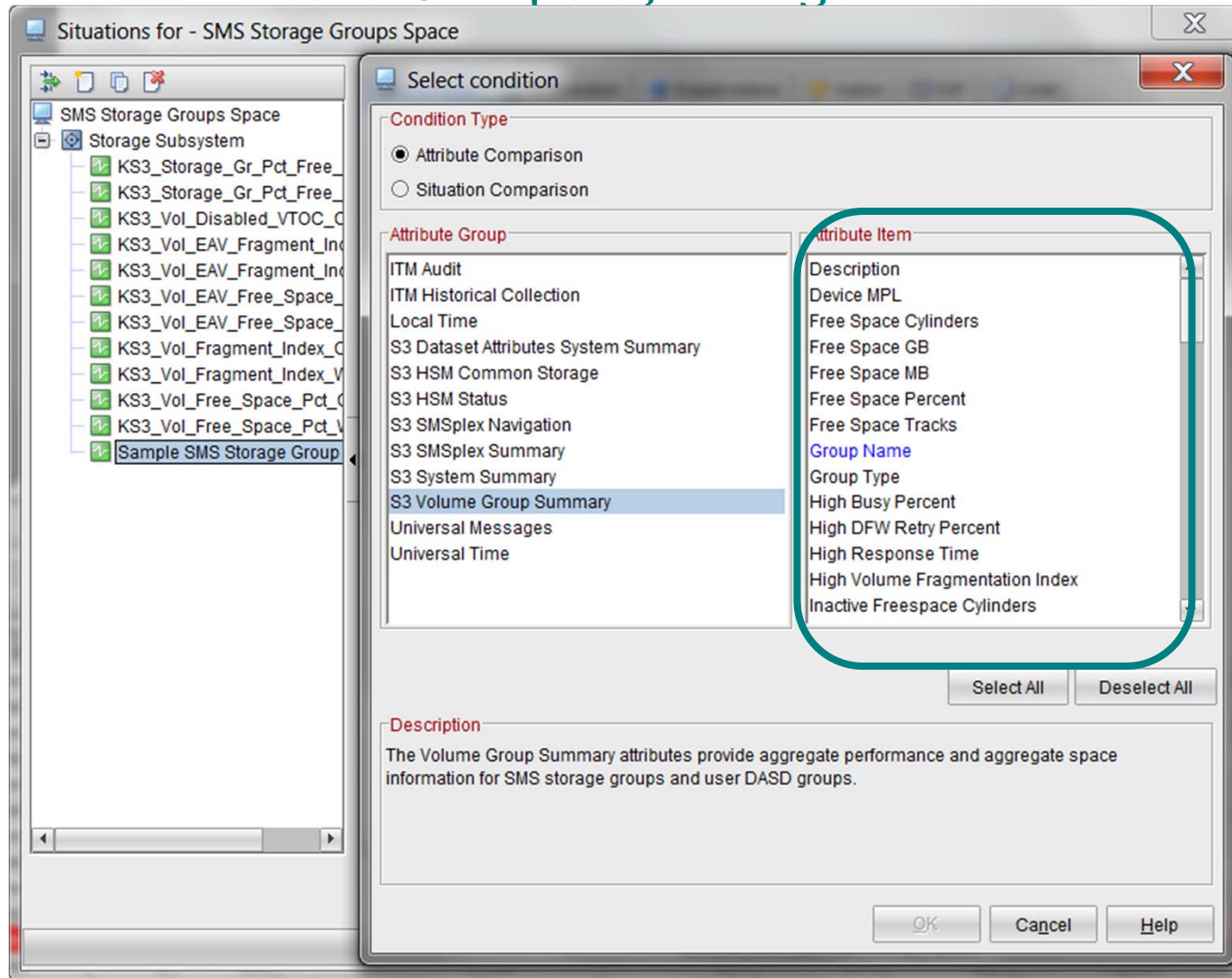
Description

The VTS Overview attributes provide an overview of the performance and configuration of a virtual tape server (VTS).

Select All Deselect All

OK Cancel Help

Situations Attribute Groups by Navigator Item



Situations for - SMS Storage Groups Space

Select condition

Condition Type

Attribute Comparison
 Situation Comparison

Attribute Group	Attribute Item
ITM Audit	Description
ITM Historical Collection	Device MPL
Local Time	Free Space Cylinders
S3 Dataset Attributes System Summary	Free Space GB
S3 HSM Common Storage	Free Space MB
S3 HSM Status	Free Space Percent
S3 SMSplex Navigation	Free Space Tracks
S3 SMSplex Summary	Group Name
S3 System Summary	Group Type
S3 Volume Group Summary	High Busy Percent
Universal Messages	High DFW Retry Percent
Universal Time	High Response Time
	High Volume Fragmentation Index
	Inactive Freespace Cylinders

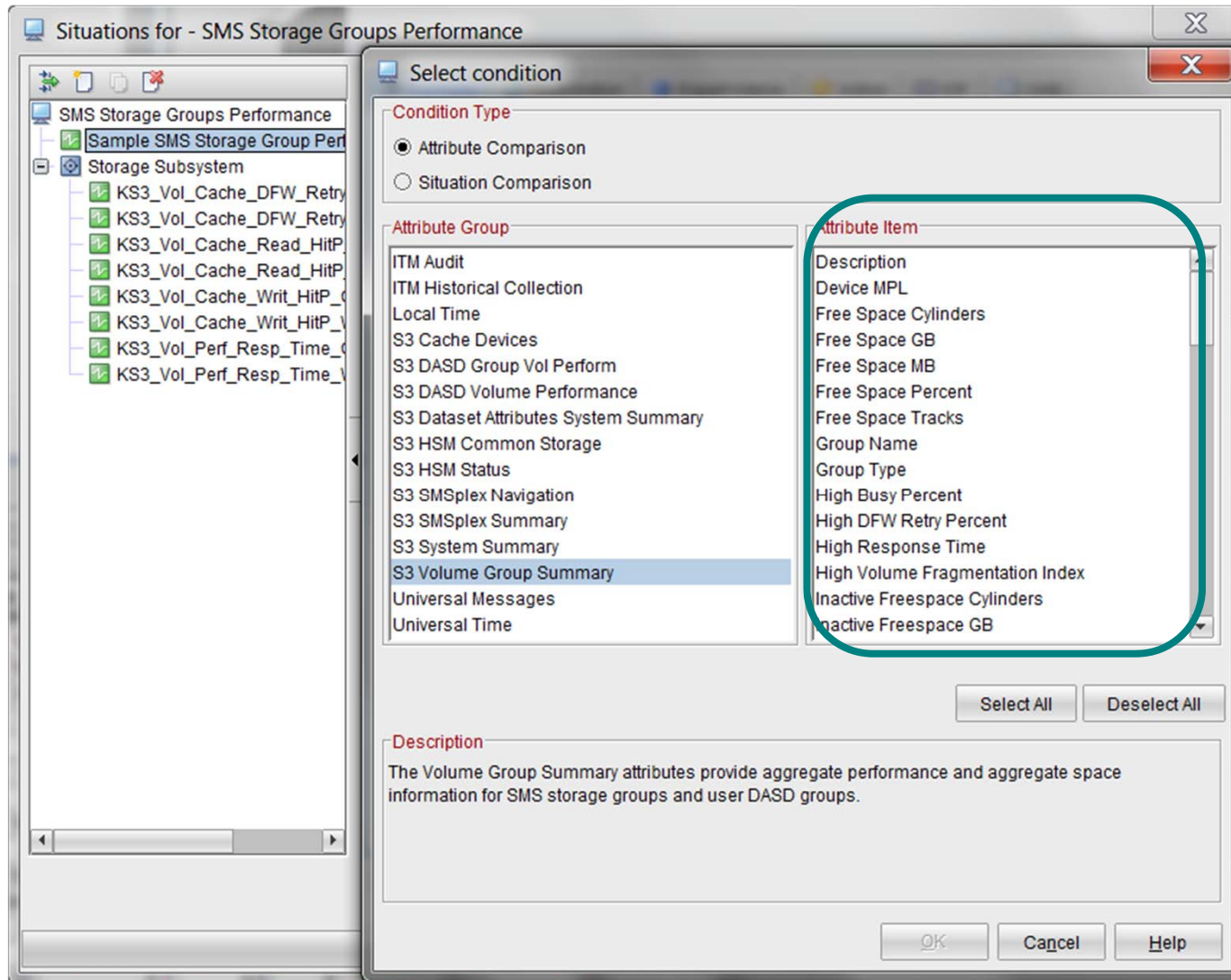
Select All Deselect All

Description

The Volume Group Summary attributes provide aggregate performance and aggregate space information for SMS storage groups and user DASD groups.

OK Cancel Help

Situations Attribute Groups by Navigator Item



Situations for - SMS Storage Groups Performance

Select condition

Condition Type

- Attribute Comparison
- Situation Comparison

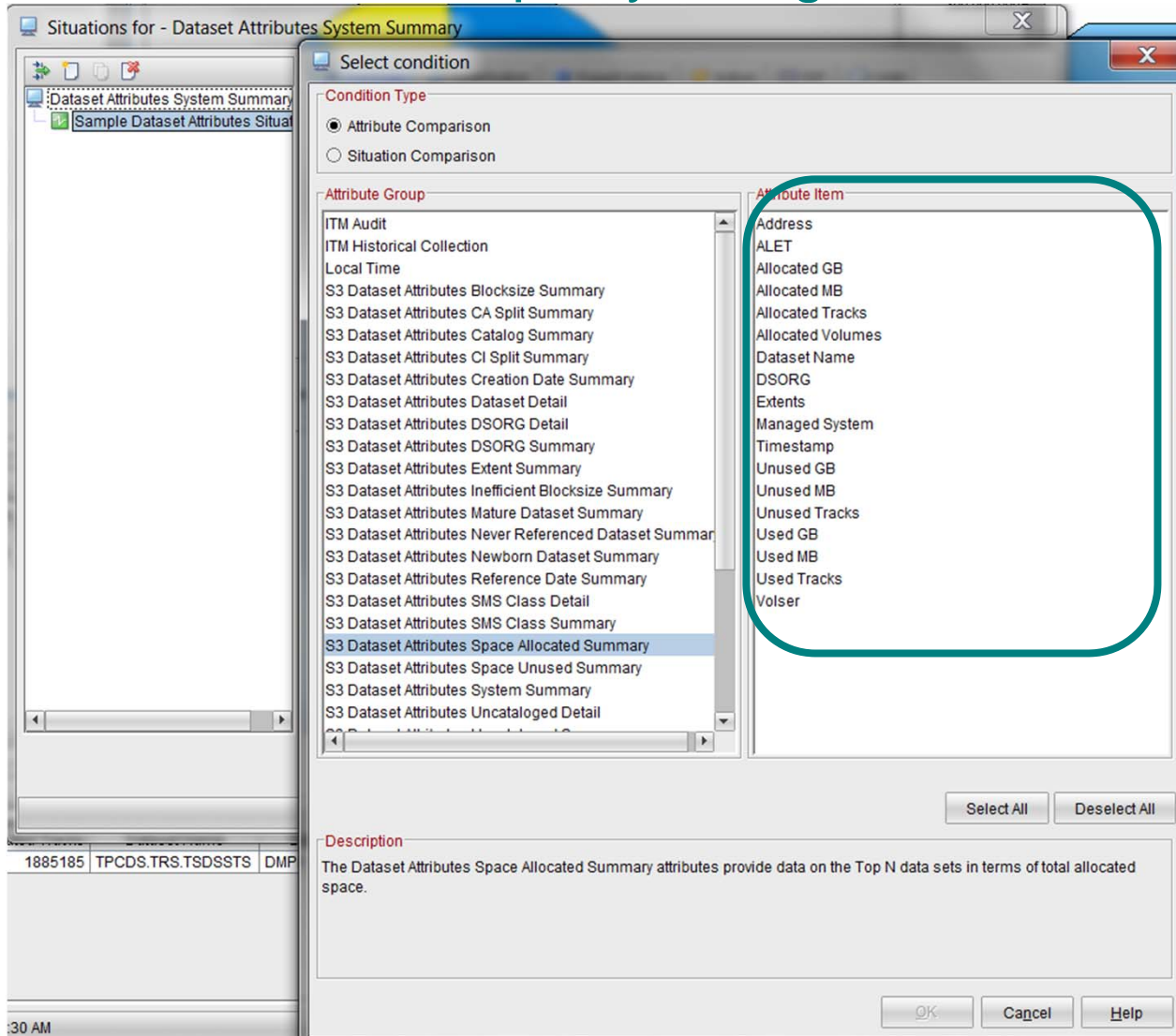
Attribute Group	Attribute Item
ITM Audit	Description
ITM Historical Collection	Device MPL
Local Time	Free Space Cylinders
S3 Cache Devices	Free Space GB
S3 DASD Group Vol Perform	Free Space MB
S3 DASD Volume Performance	Free Space Percent
S3 Dataset Attributes System Summary	Free Space Tracks
S3 HSM Common Storage	Group Name
S3 HSM Status	Group Type
S3 SMSplex Navigation	High Busy Percent
S3 SMSplex Summary	High DFW Retry Percent
S3 System Summary	High Response Time
S3 Volume Group Summary	High Volume Fragmentation Index
Universal Messages	Inactive Freespace Cylinders
Universal Time	Inactive Freespace GB

Description

The Volume Group Summary attributes provide aggregate performance and aggregate space information for SMS storage groups and user DASD groups.

Buttons: Select All, Deselect All, OK, Cancel, Help

Situations Attribute Groups by Navigator Item



Select condition

Condition Type

Attribute Comparison
 Situation Comparison

Attribute Group

- ITM Audit
- ITM Historical Collection
- Local Time
- S3 Dataset Attributes Blocksize Summary
- S3 Dataset Attributes CA Split Summary
- S3 Dataset Attributes Catalog Summary
- S3 Dataset Attributes CI Split Summary
- S3 Dataset Attributes Creation Date Summary
- S3 Dataset Attributes Dataset Detail
- S3 Dataset Attributes DSORG Detail
- S3 Dataset Attributes DSORG Summary
- S3 Dataset Attributes Extent Summary
- S3 Dataset Attributes Inefficient Blocksize Summary
- S3 Dataset Attributes Mature Dataset Summary
- S3 Dataset Attributes Never Referenced Dataset Summary
- S3 Dataset Attributes Newborn Dataset Summary
- S3 Dataset Attributes Reference Date Summary
- S3 Dataset Attributes SMS Class Detail
- S3 Dataset Attributes SMS Class Summary
- S3 Dataset Attributes Space Allocated Summary**
- S3 Dataset Attributes Space Unused Summary
- S3 Dataset Attributes System Summary
- S3 Dataset Attributes Uncataloged Detail

Attribute Item

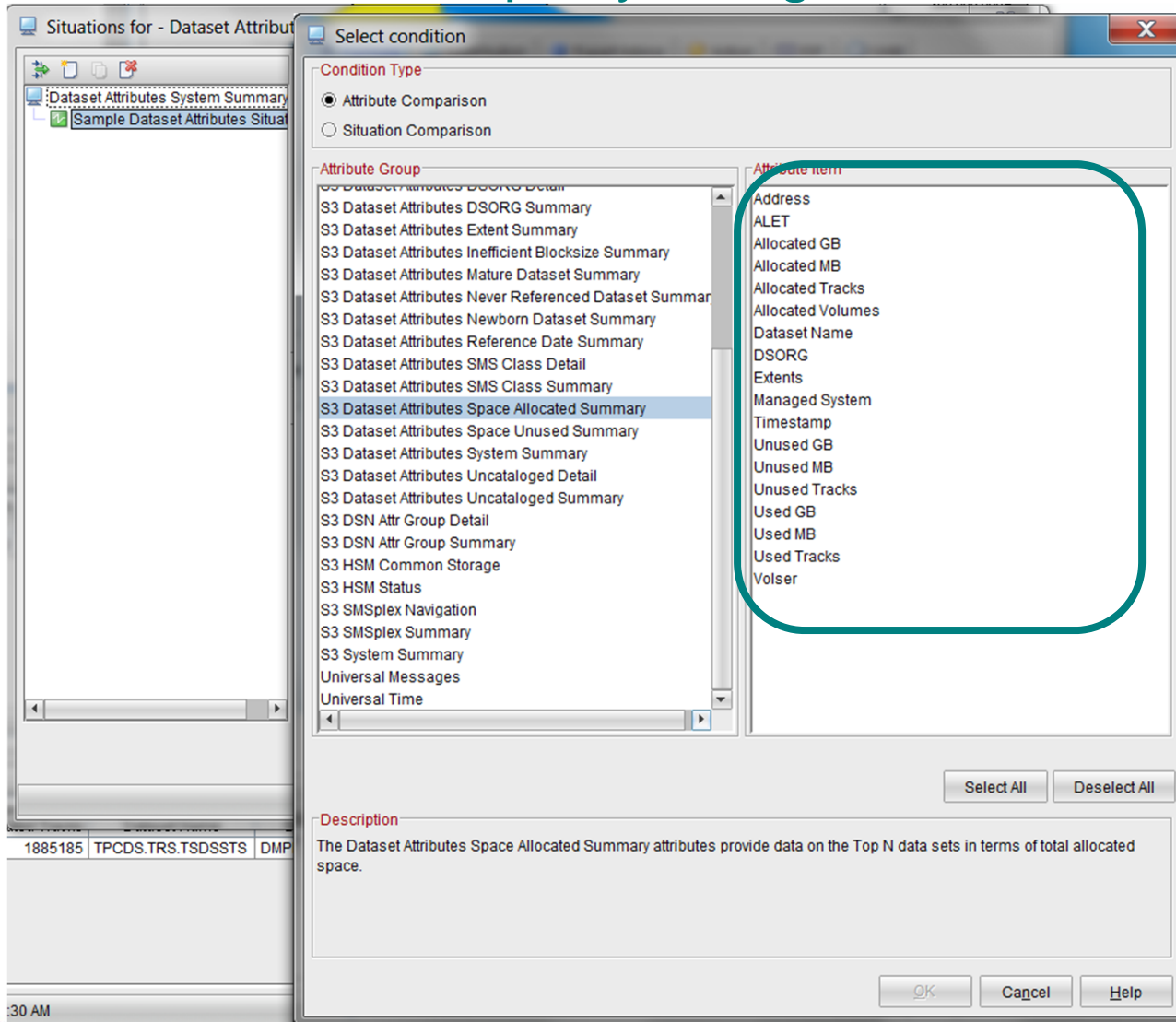
- Address
- ALET
- Allocated GB
- Allocated MB
- Allocated Tracks
- Allocated Volumes
- Dataset Name
- DSORG
- Extents
- Managed System
- Timestamp
- Unused GB
- Unused MB
- Unused Tracks
- Used GB
- Used MB
- Used Tracks
- Volser

Description

The Dataset Attributes Space Allocated Summary attributes provide data on the Top N data sets in terms of total allocated space.

Buttons: Select All, Deselect All, OK, Cancel, Help

Situations Attribute Groups by Navigator Item



Condition Type

Attribute Comparison
 Situation Comparison

Attribute Group

- S3 Dataset Attributes DSORG Detail
- S3 Dataset Attributes DSORG Summary
- S3 Dataset Attributes Extent Summary
- S3 Dataset Attributes Inefficient Blocksize Summary
- S3 Dataset Attributes Mature Dataset Summary
- S3 Dataset Attributes Never Referenced Dataset Summary
- S3 Dataset Attributes Newborn Dataset Summary
- S3 Dataset Attributes Reference Date Summary
- S3 Dataset Attributes SMS Class Detail
- S3 Dataset Attributes SMS Class Summary
- S3 Dataset Attributes Space Allocated Summary**
- S3 Dataset Attributes Space Unused Summary
- S3 Dataset Attributes System Summary
- S3 Dataset Attributes Uncataloged Detail
- S3 Dataset Attributes Uncataloged Summary
- S3 DSN Attr Group Detail
- S3 DSN Attr Group Summary
- S3 HSM Common Storage
- S3 HSM Status
- S3 SMSplex Navigation
- S3 SMSplex Summary
- S3 System Summary
- Universal Messages
- Universal Time

Attribute Item

- Address
- ALET
- Allocated GB
- Allocated MB
- Allocated Tracks
- Allocated Volumes
- Dataset Name
- DSORG
- Extents
- Managed System
- Timestamp
- Unused GB
- Unused MB
- Unused Tracks
- Used GB
- Used MB
- Used Tracks
- Volser

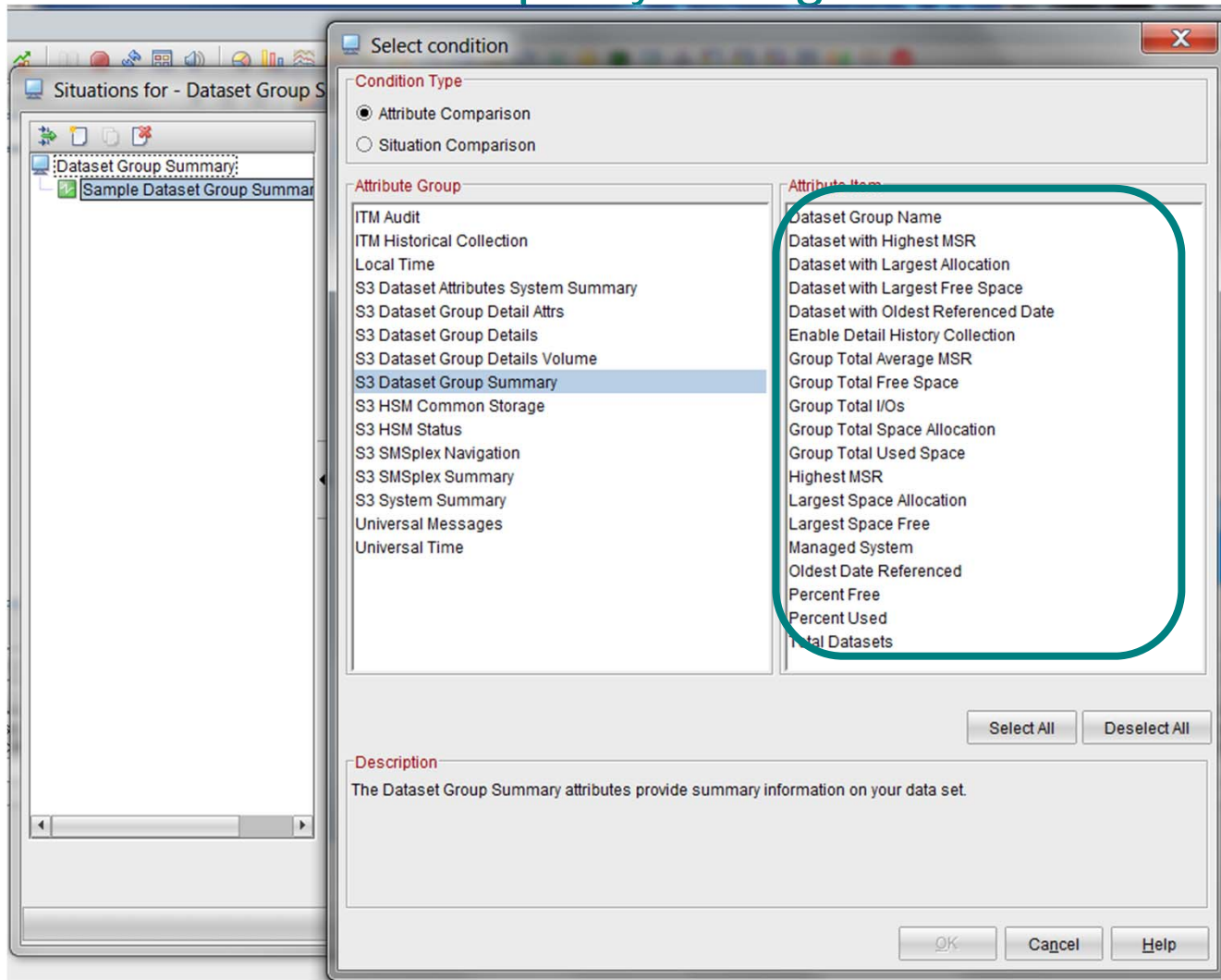
Description

The Dataset Attributes Space Allocated Summary attributes provide data on the Top N data sets in terms of total allocated space.

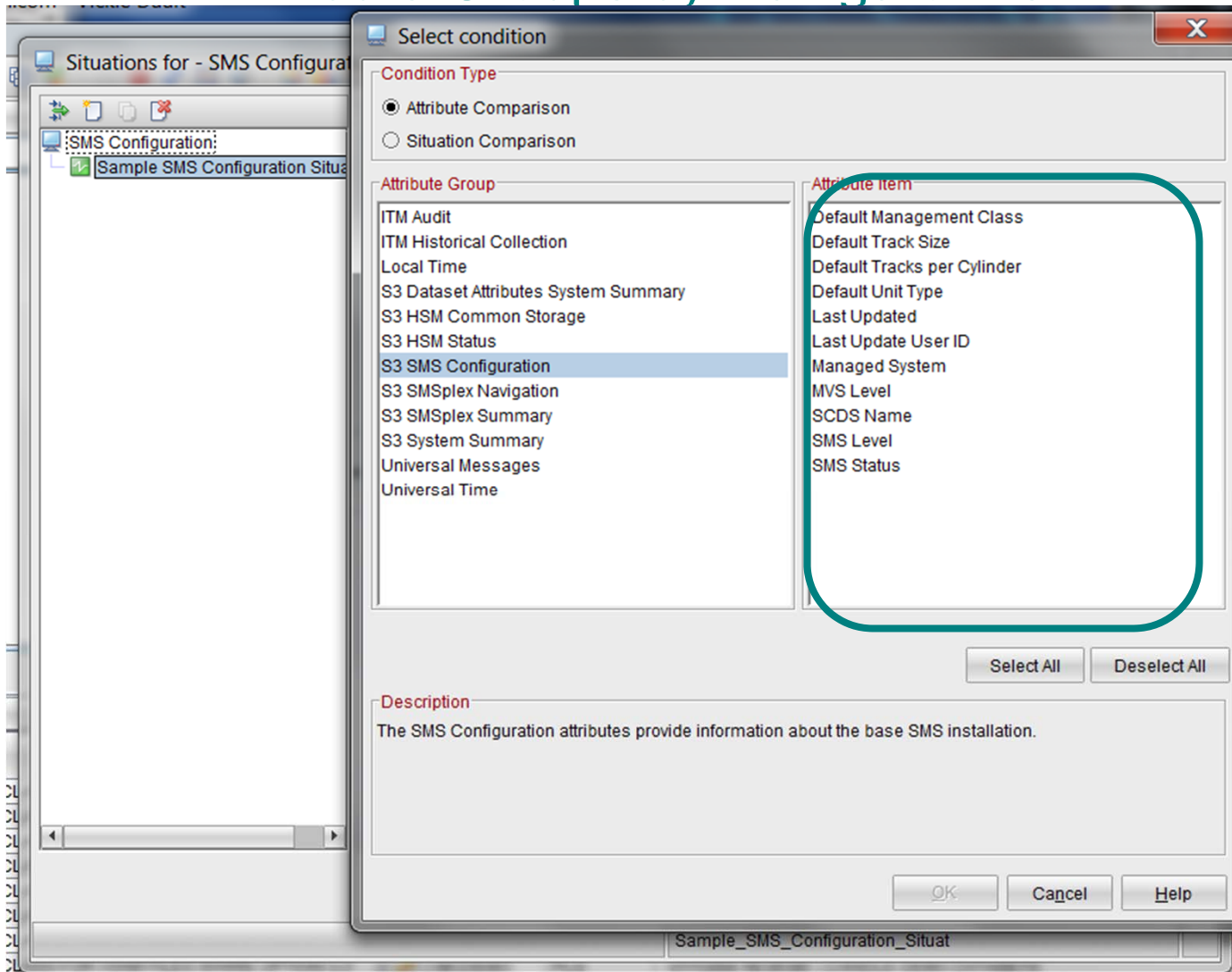
1885185 | TPCDS.TRS.TSDSSTS | DMP

3:30 AM

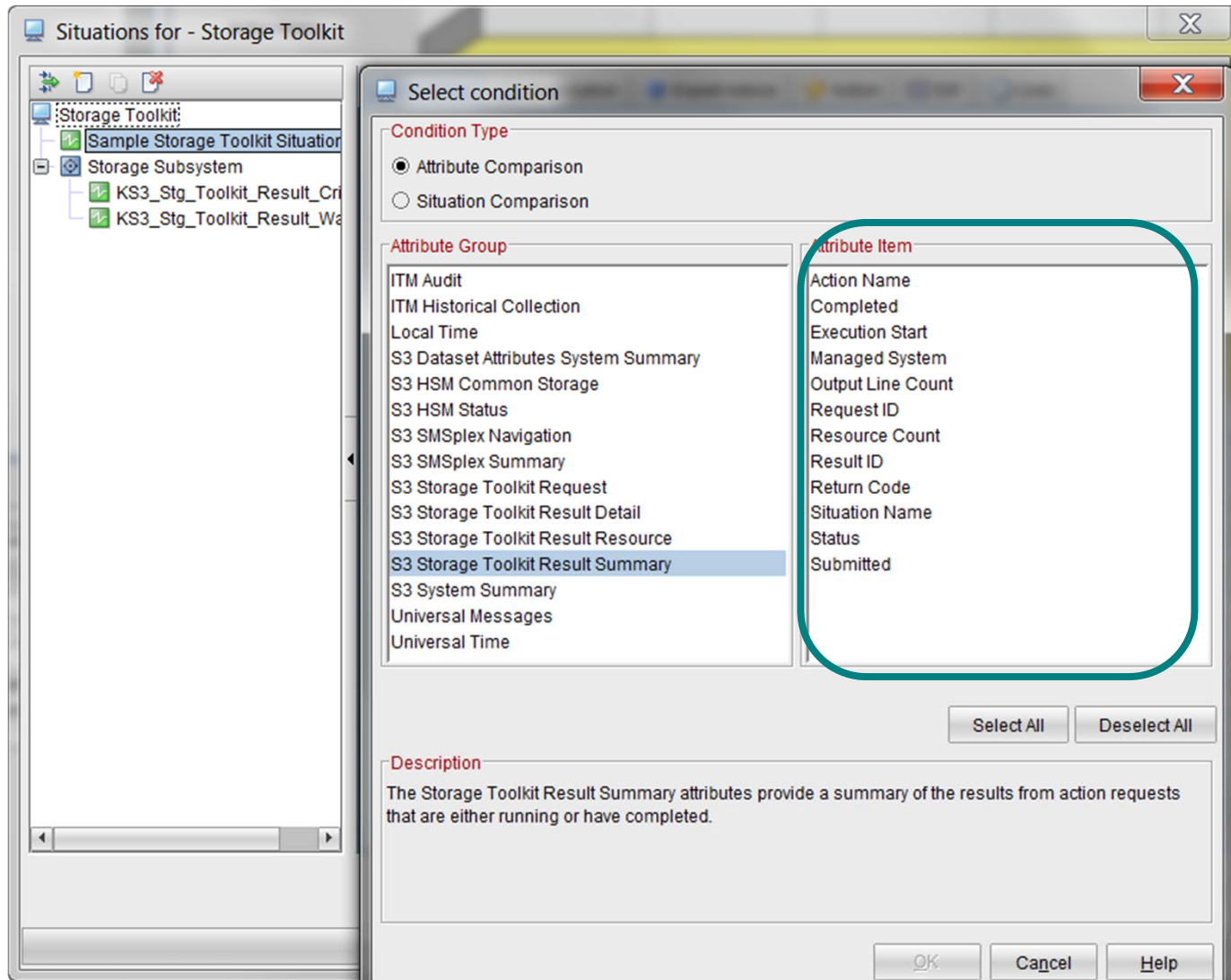
Situations Attribute Groups by Navigator Item



Situations Attribute Groups by Navigator Item



Situations Attribute Groups by Navigator Item



Situations for - Storage Toolkit

Select condition

Condition Type

Attribute Comparison

Situation Comparison

Attribute Group	Attribute Item
ITM Audit	Action Name
ITM Historical Collection	Completed
Local Time	Execution Start
S3 Dataset Attributes System Summary	Managed System
S3 HSM Common Storage	Output Line Count
S3 HSM Status	Request ID
S3 SMSplex Navigation	Resource Count
S3 SMSplex Summary	Result ID
S3 Storage Toolkit Request	Return Code
S3 Storage Toolkit Result Detail	Situation Name
S3 Storage Toolkit Result Resource	Status
S3 Storage Toolkit Result Summary	Submitted
S3 System Summary	
Universal Messages	
Universal Time	

Select All Deselect All

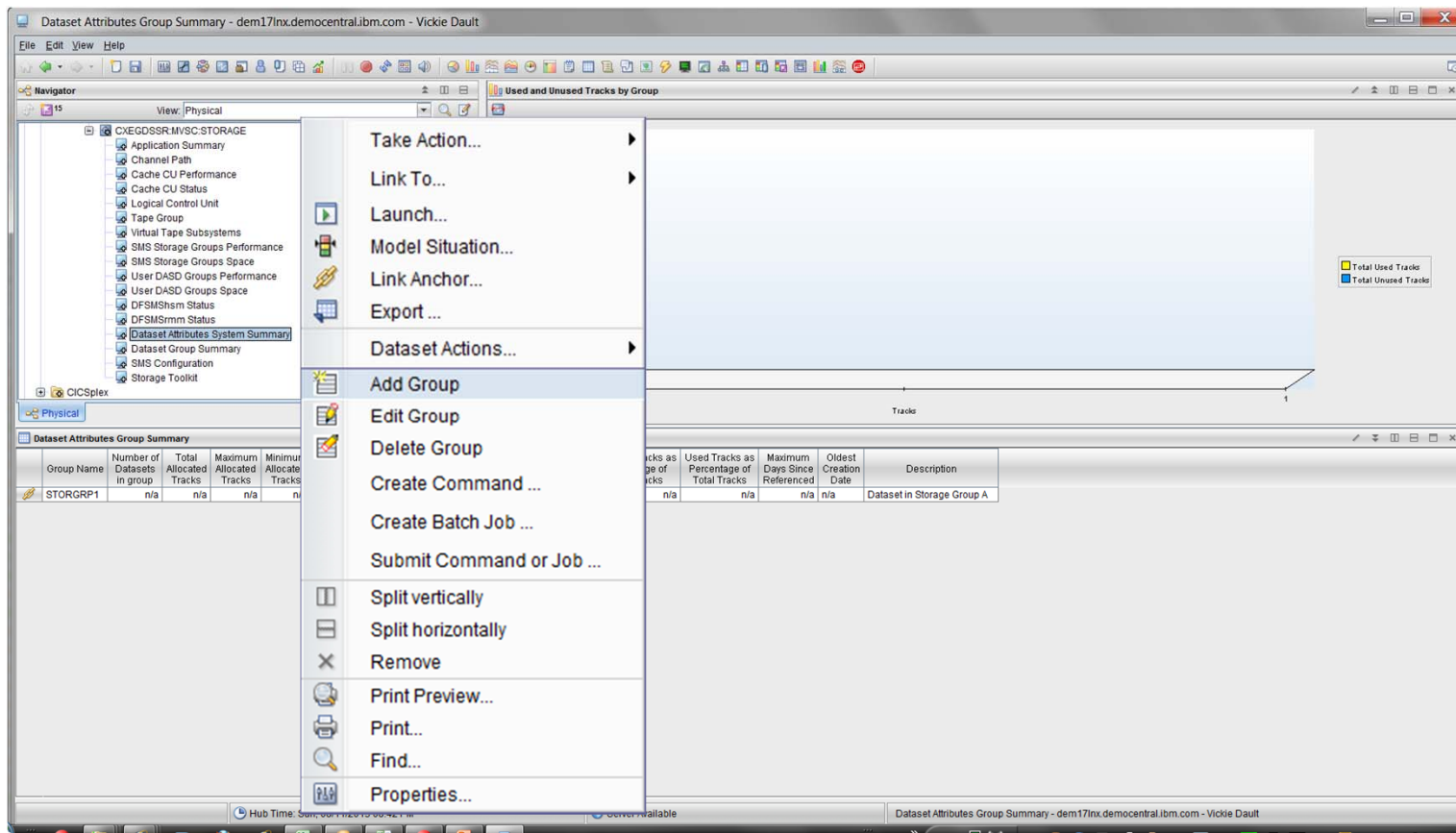
Description

The Storage Toolkit Result Summary attributes provide a summary of the results from action requests that are either running or have completed.

OK Cancel Help

Situations Sample Situation

Dataset Attributes System Summary Dataset Group Summary

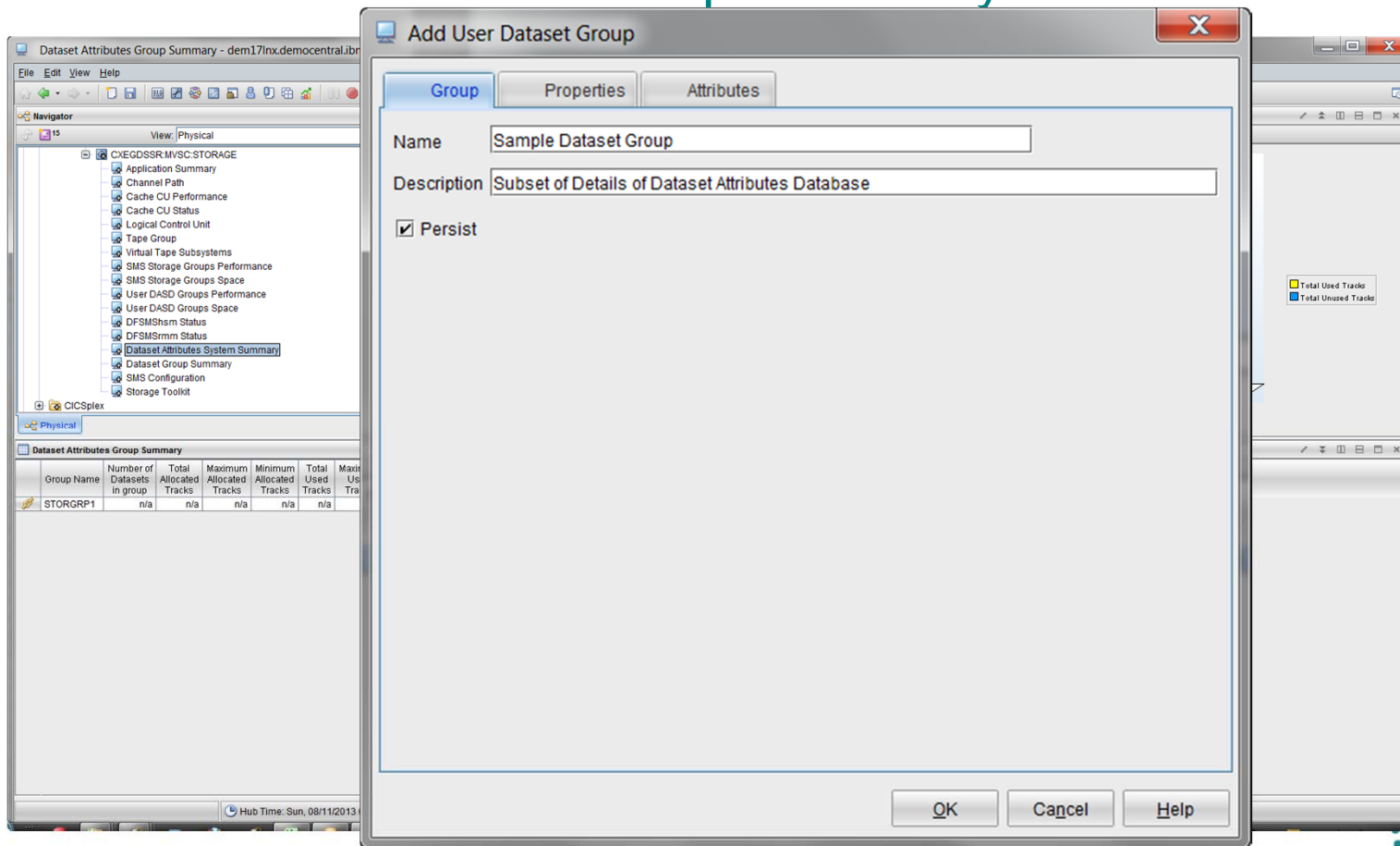


Group Name	Number of Datasets in group	Total Allocated Tracks	Maximum Allocated Tracks	Minimum Allocated Tracks	Tracks as a Percentage of Total Tracks	Used Tracks as a Percentage of Total Tracks	Maximum Days Since Referenced	Oldest Creation Date	Description
STORGRP1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Dataset in Storage Group A

Situations Sample Situation

Dataset Attributes System Summary

Dataset Group Summary



The screenshot displays a software interface with a 'Dataset Attributes Group Summary' window in the background and an 'Add User Dataset Group' dialog box in the foreground.

The 'Add User Dataset Group' dialog box has three tabs: 'Group', 'Properties', and 'Attributes'. The 'Group' tab is active, showing the following fields:

- Name: Sample Dataset Group
- Description: Subset of Details of Dataset Attributes Database
- Persist

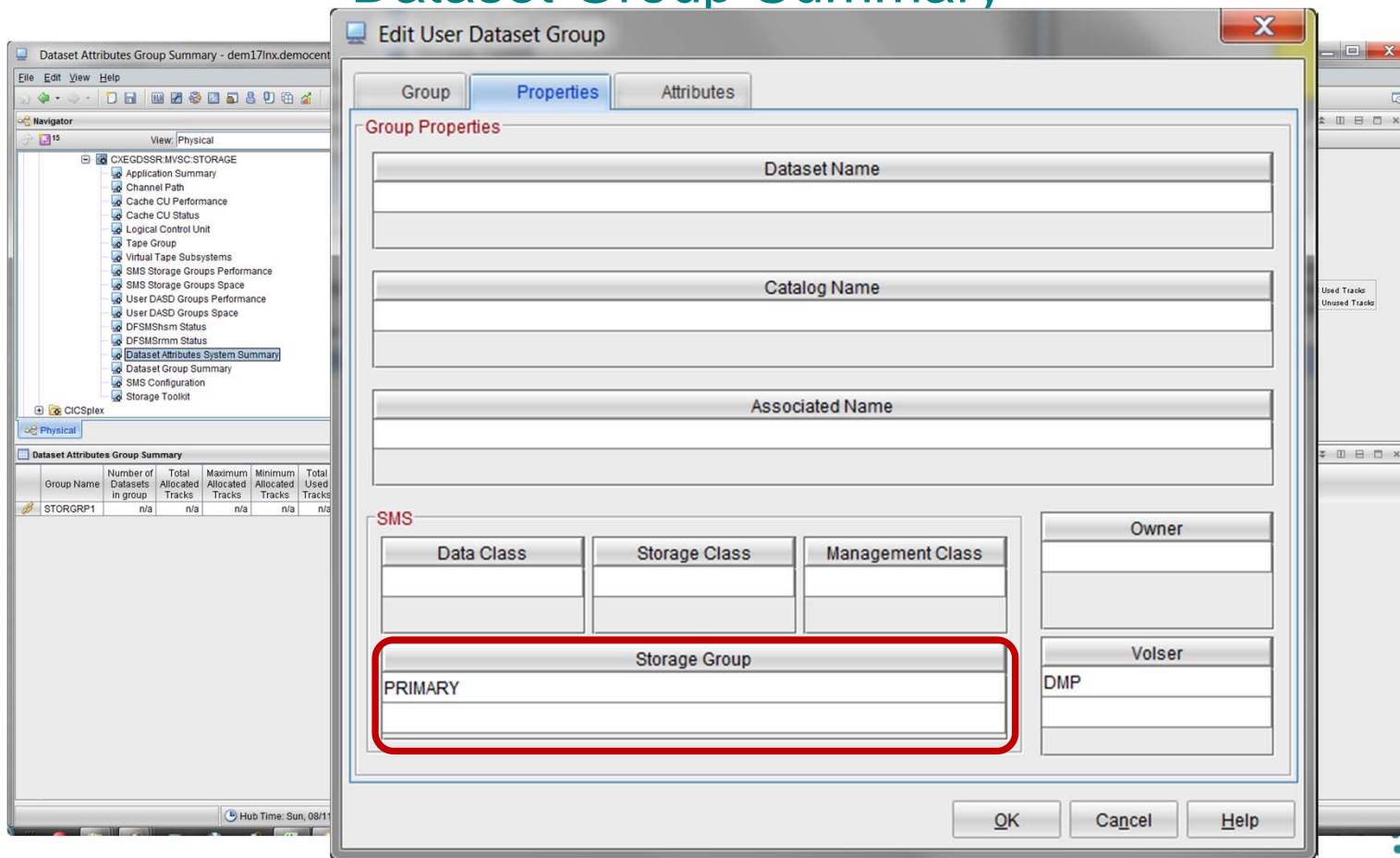
At the bottom of the dialog box are buttons for 'OK', 'Cancel', and 'Help'.

The background window, 'Dataset Attributes Group Summary', shows a tree view on the left with 'Dataset Attributes System Summary' selected. Below the tree is a table with the following data:

Group Name	Number of Datasets in group	Total Allocated Tracks	Maximum Allocated Tracks	Minimum Allocated Tracks	Total Used Tracks	Maximum Usable Tracks
STORGRP1	n/a	n/a	n/a	n/a	n/a	n/a

Situations Sample Situation

Dataset Attributes System Summary Dataset Group Summary



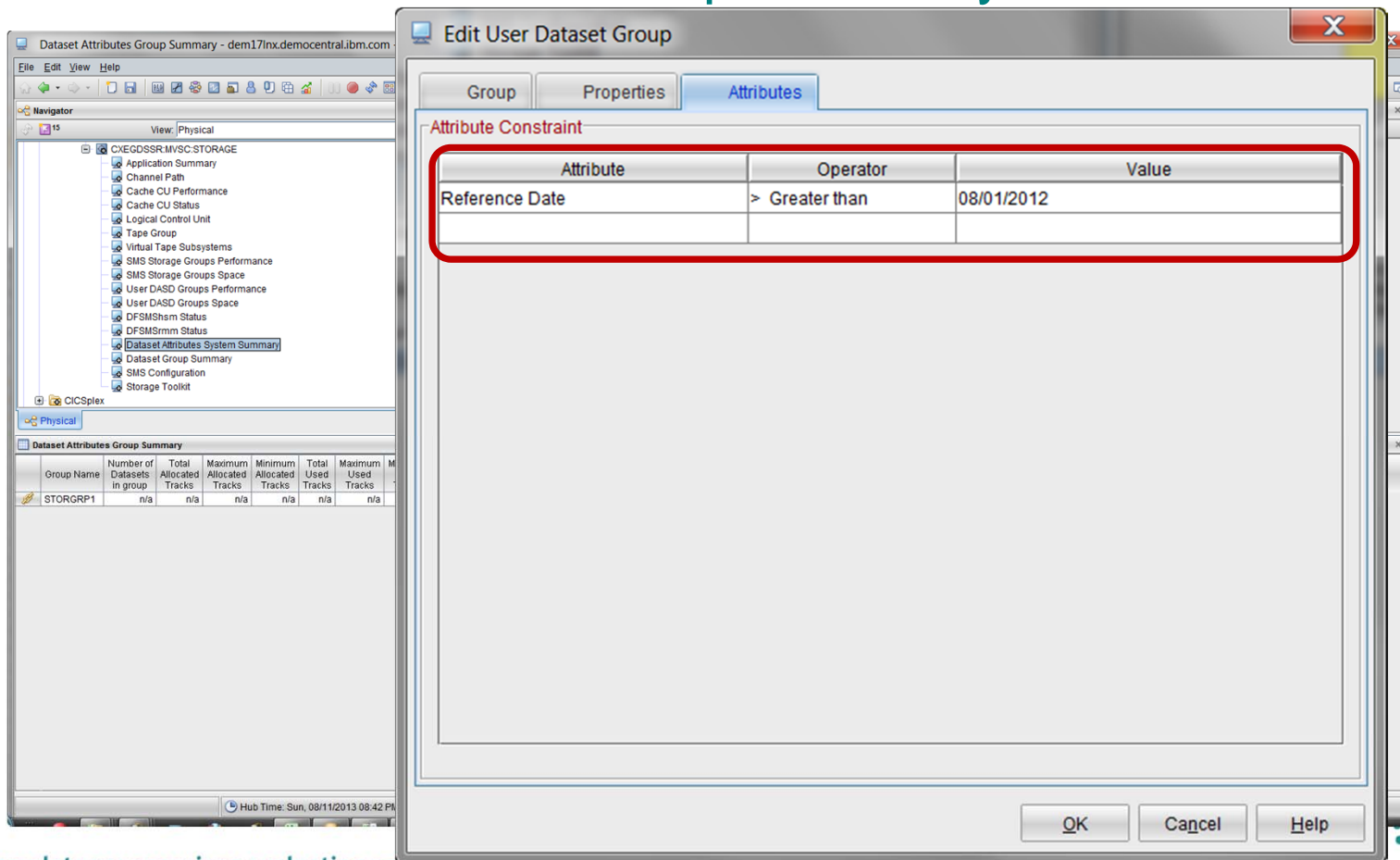
Dataset Attributes Group Summary

Group Name	Number of Datasets in group	Total Allocated Tracks	Maximum Allocated Tracks	Minimum Allocated Tracks	Total Used Tracks
STORGRP1	n/a	n/a	n/a	n/a	n/a

Complete your sessions evaluation online at [SHARE.org/BostonEval](https://www.share.org/BostonEval)

Situations Sample Situation

Dataset Attributes System Summary Dataset Group Summary



The screenshot shows the 'Edit User Dataset Group' dialog box in IBM Storage Explorer. The 'Attributes' tab is active, displaying an 'Attribute Constraint' table. The table has three columns: 'Attribute', 'Operator', and 'Value'. A red box highlights the first row of the table.

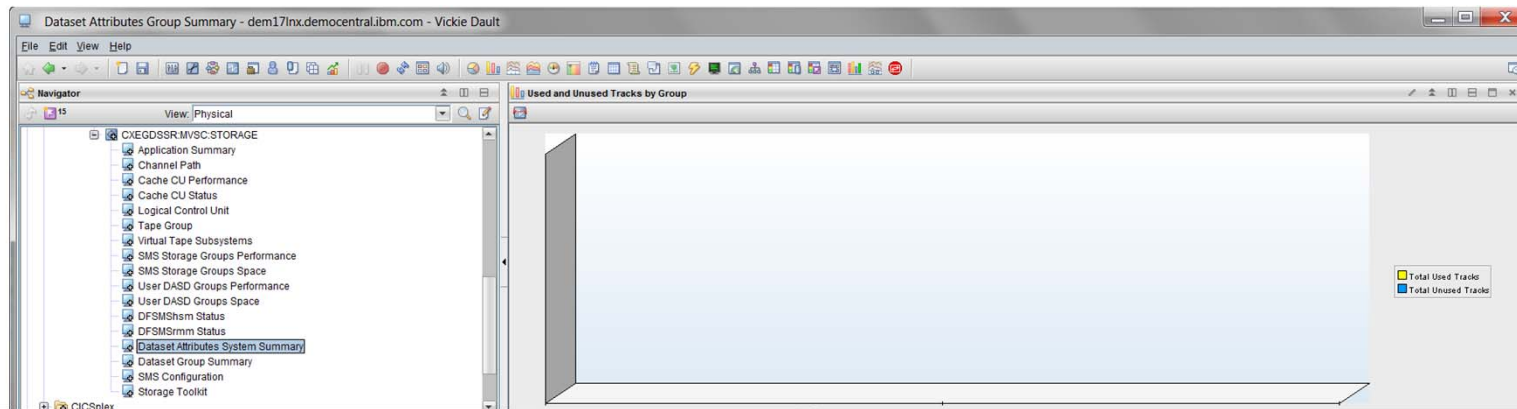
Attribute	Operator	Value
Reference Date	> Greater than	08/01/2012

Below the dialog box, a portion of the 'Dataset Attributes Group Summary' table is visible:

Group Name	Number of Datasets in group	Total Allocated Tracks	Maximum Allocated Tracks	Minimum Allocated Tracks	Total Used Tracks	Maximum Used Tracks
STORGRP1	n/a	n/a	n/a	n/a	n/a	n/a

Situations Sample Situation

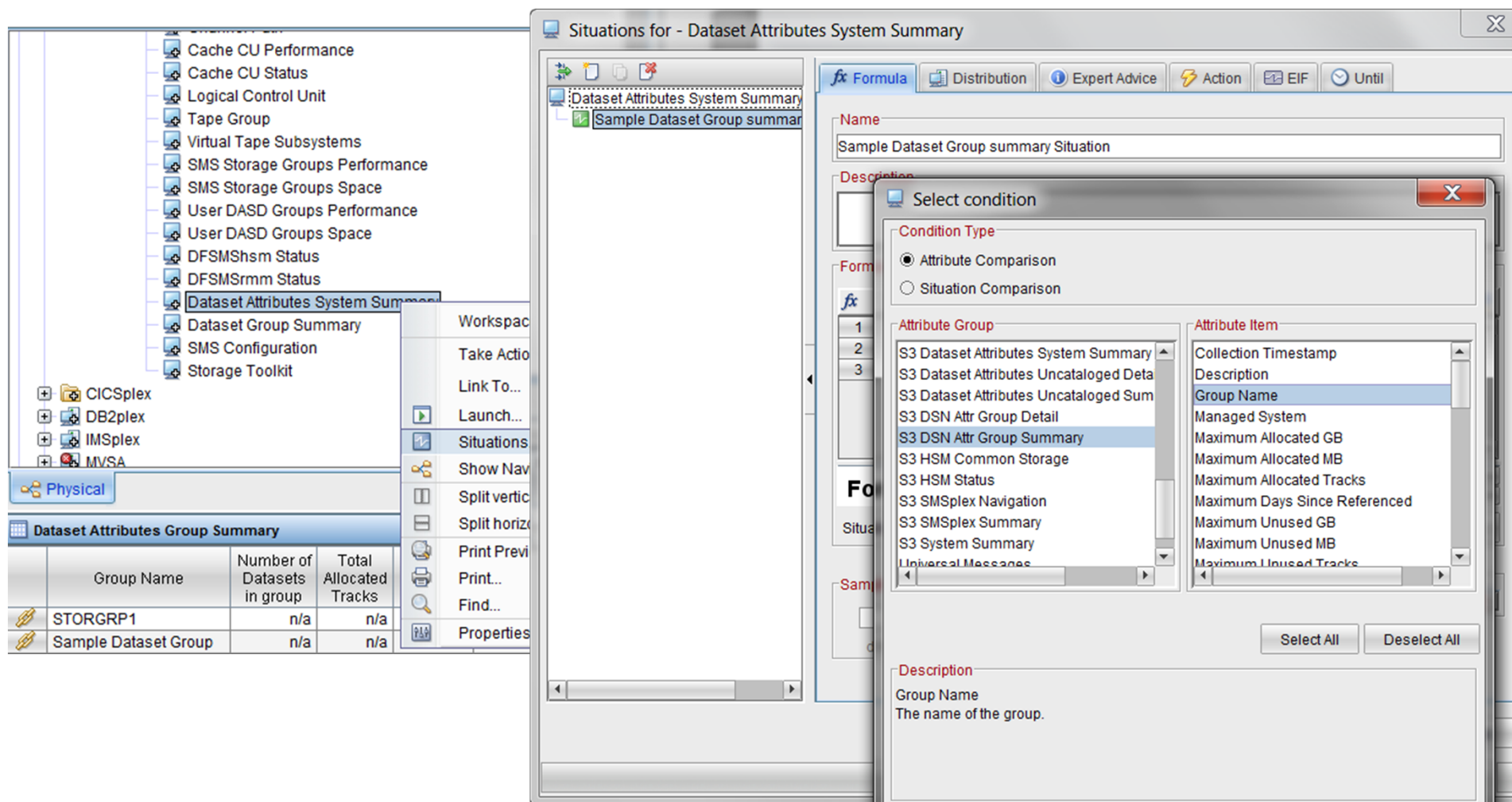
Dataset Attributes System Summary Dataset Group Summary FILTERED



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
STORGRP1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sample Dataset Group	27747	5942351	87195	0	4942217	87195	0	1000134	65535	0	17	83	7466	07/30/90 00:00:00

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
STORGRP1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sample Dataset Group	13537	4924181	87195	0	4371549	87195	0	52632	65535	0	11	89	373	07/30/90 00:00:00

Situations



The screenshot displays the SHARE software interface. On the left, a tree view shows various system summary categories, with 'Dataset Attributes System Summary' selected. Below the tree is a table titled 'Dataset Attributes Group Summary'.

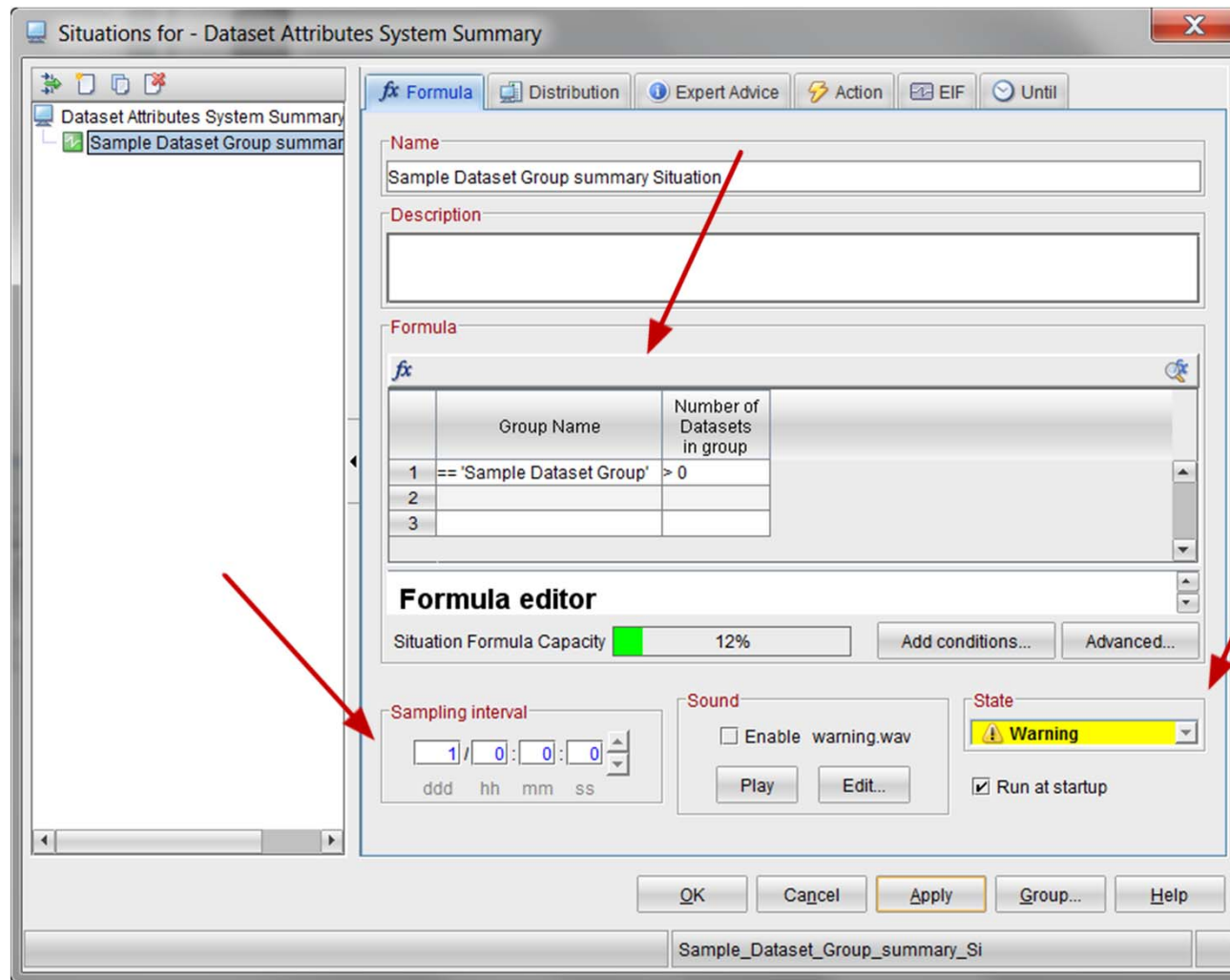
Group Name	Number of Datasets in group	Total Allocated Tracks
STORGRP1	n/a	n/a
Sample Dataset Group	n/a	n/a

The main window is titled 'Situations for - Dataset Attributes System Summary'. It features a toolbar with options like 'Formula', 'Distribution', 'Expert Advice', 'Action', 'EIF', and 'Until'. A 'Select condition' dialog box is open, showing the following configuration:

- Name:** Sample Dataset Group summary Situation
- Description:** (empty)
- Condition Type:**
 - Attribute Comparison
 - Situation Comparison
- Attribute Group:** S3 DSN Attr Group Summary
- Attribute Item:** Group Name
- Description:** Group Name
The name of the group.

Situations

Formula



Situations for - Dataset Attributes System Summary

fx Formula Distribution Expert Advice Action EIF Until

Name
Sample Dataset Group summary Situation

Description

Formula

	Group Name	Number of Datasets in group
1	== 'Sample Dataset Group'	> 0
2		
3		

Formula editor

Situation Formula Capacity 12% Add conditions... Advanced...

Sampling interval: 1 / 0 : 0 : 0 (ddd hh mm ss)

Sound: Enable warning.wav Play Edit...

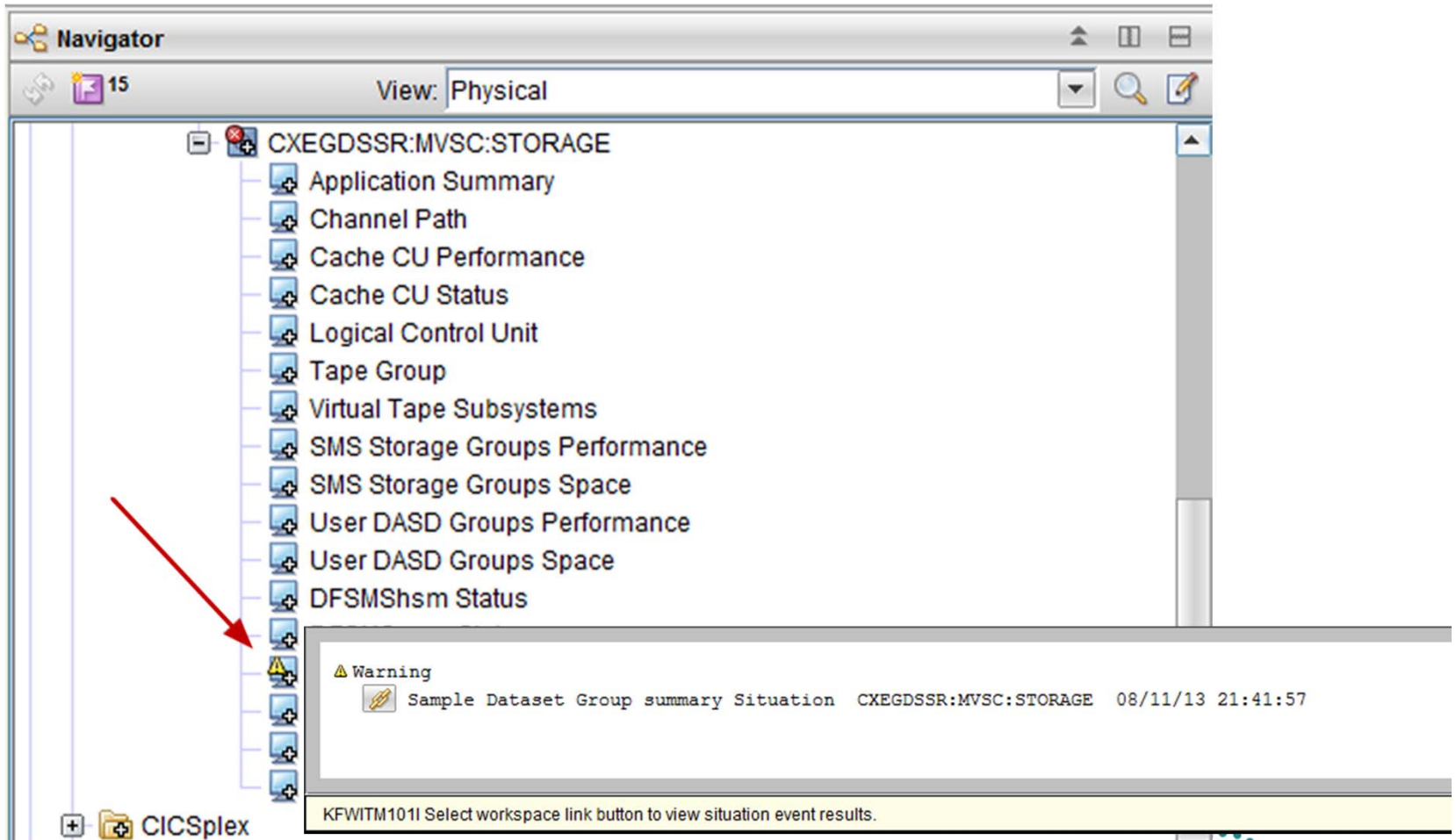
State: Warning Run at startup

OK Cancel Apply Group... Help


Sample_Dataset_Group_summary_Si

Situations

Event



Navigator View: Physical

- CXEGDSSR:MVSC:STORAGE
 - Application Summary
 - Channel Path
 - Cache CU Performance
 - Cache CU Status
 - Logical Control Unit
 - Tape Group
 - Virtual Tape Subsystems
 - SMS Storage Groups Performance
 - SMS Storage Groups Space
 - User DASD Groups Performance
 - User DASD Groups Space
 - DFSMSHsm Status
 -  Warning
 - Sample Dataset Group summary Situation CXEGDSSR:MVSC:STORAGE 08/11/13 21:41:57


CICSplex

KFWITM101I Select workspace link button to view situation event results.

Situations

Situation Correlation

Situations

cor·re·la·tion  *noun* \,kôr-ə-'lā-shən, ,kär-\

Definition of CORRELATION

1: the state or relation of being [correlated](#); *specifically* : a relation existing between phenomena or things or between mathematical or statistical variables which tend to vary, be associated, or occur together in a way not expected on the basis of chance alone <the obviously high positive *correlation* between scholastic aptitude and college entrance — J. B. Conant>

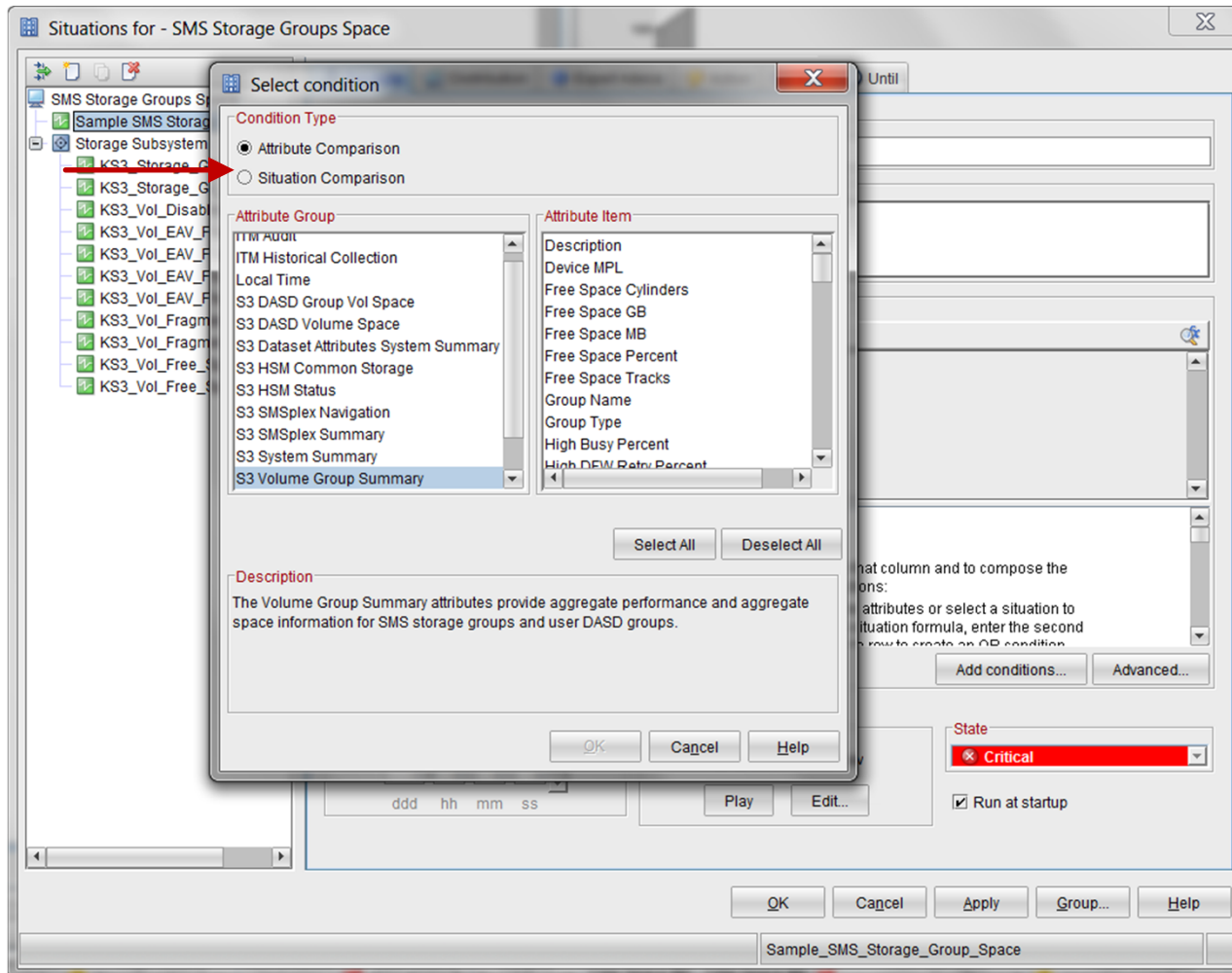
Situation Correlation

- Your Attributes aren't Grouped
- How do you write a Situation that is conditional on two **Attributes** in different Attribute Groups or Navigator Items?

Situation Correlation

Situations

Formula



Select condition

Condition Type

- Attribute Comparison
- Situation Comparison

Attribute Group

- ITM Audit
- ITM Historical Collection
- Local Time
- S3 DASD Group Vol Space
- S3 DASD Volume Space
- S3 Dataset Attributes System Summary
- S3 HSM Common Storage
- S3 HSM Status
- S3 SMSplex Navigation
- S3 SMSplex Summary
- S3 System Summary
- S3 Volume Group Summary

Attribute Item

- Description
- Device MPL
- Free Space Cylinders
- Free Space GB
- Free Space MB
- Free Space Percent
- Free Space Tracks
- Group Name
- Group Type
- High Busy Percent
- High DEW Ratio Percent

Select All Deselect All

Description

The Volume Group Summary attributes provide aggregate performance and aggregate space information for SMS storage groups and user DASD groups.

OK Cancel Help

State: **Critical**

Run at startup

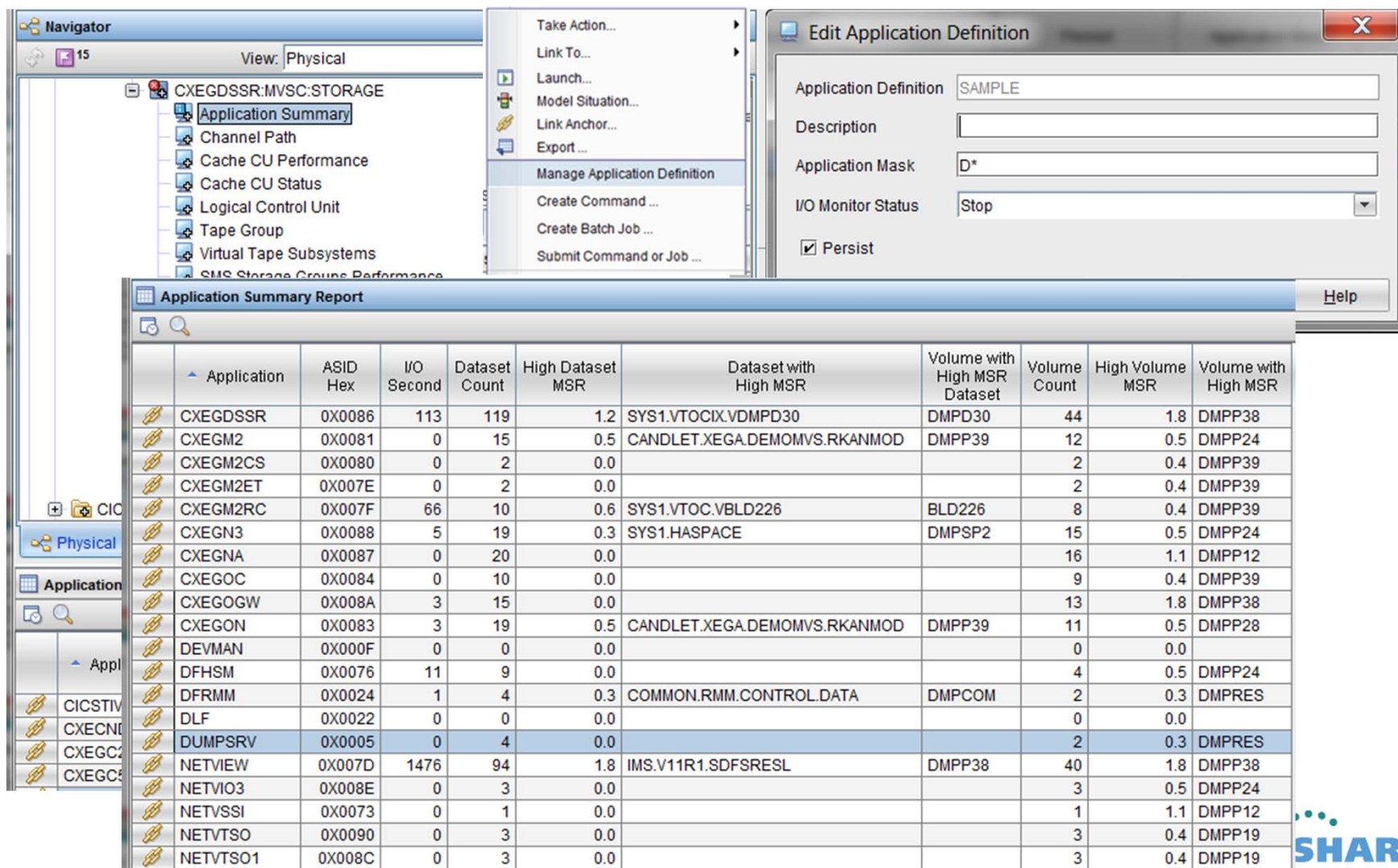
OK Cancel Apply Group... Help

Sample_SMS_Storage_Group_Space

Situation Correlation

- My Scenario is that when a job is active a certain Storage Group must have a lower utilization than normal
- Create the initial situation to monitor for the job to be active
- Create the secondary situation that considers whether the first situation is true

Situation Correlation

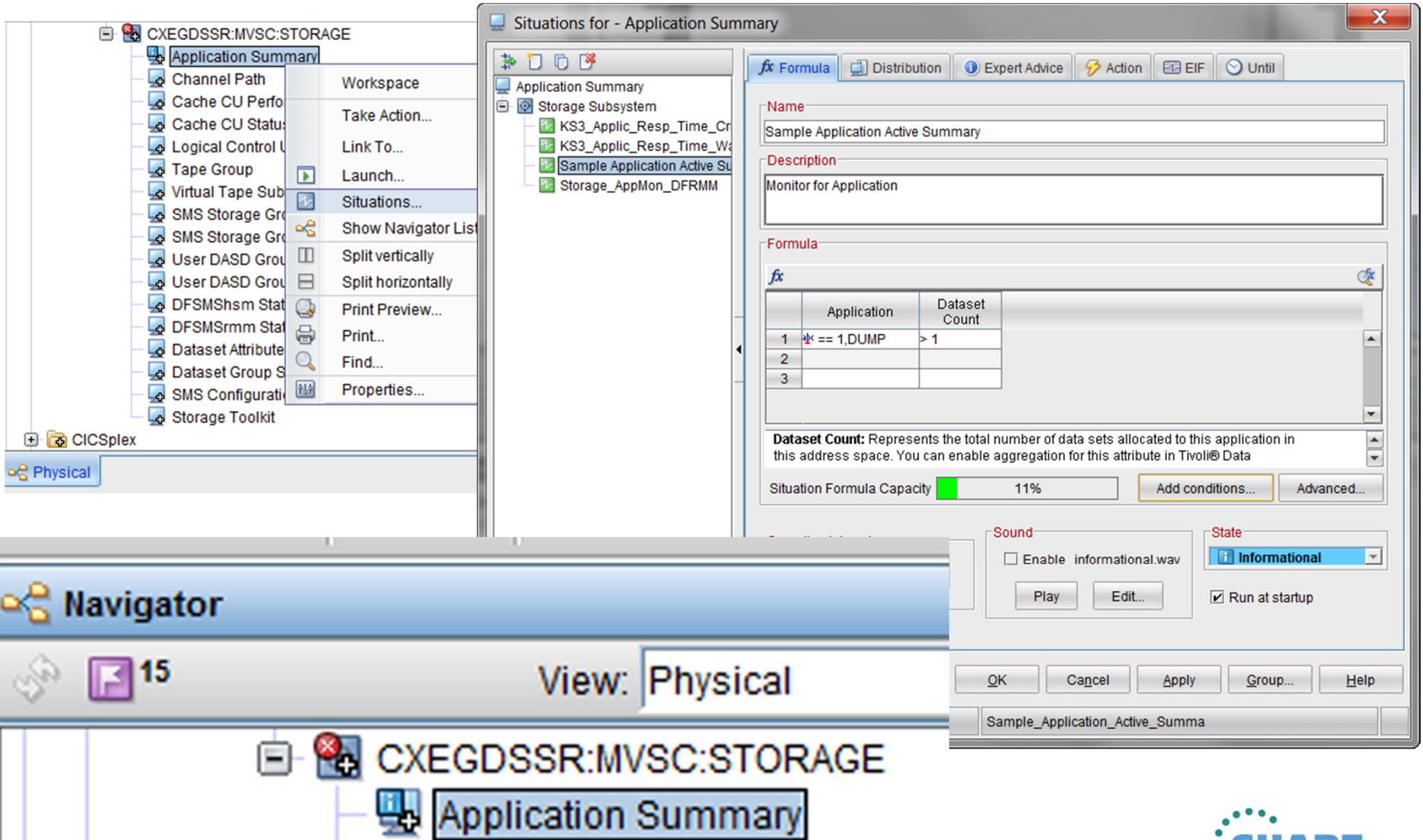


The screenshot displays the SHARE software interface. On the left, a Navigator pane shows a tree view of storage components, with 'Application Summary' selected. A context menu is open over this selection, showing options like 'Take Action...', 'Link To...', 'Launch...', 'Model Situation...', 'Link Anchor...', 'Export...', 'Manage Application Definition', 'Create Command...', 'Create Batch Job...', and 'Submit Command or Job...'. In the foreground, an 'Application Summary Report' window is open, displaying a table of application performance data. To the right, an 'Edit Application Definition' dialog box is visible, showing fields for 'Application Definition' (SAMPLE), 'Description', 'Application Mask' (D*), 'I/O Monitor Status' (Stop), and a checked 'Persist' option.

Application	ASID Hex	I/O Second	Dataset Count	High Dataset MSR	Dataset with High MSR	Volume with High MSR Dataset	Volume Count	High Volume MSR	Volume with High MSR
CXEGDSSR	0X0086	113	119	1.2	SYS1.VTOCIX.VDMPD30	DMPD30	44	1.8	DMPP38
CXEGM2	0X0081	0	15	0.5	CANDLET.XEGA.DEMOMVS.RKANMOD	DMPP39	12	0.5	DMPP24
CXEGM2CS	0X0080	0	2	0.0			2	0.4	DMPP39
CXEGM2ET	0X007E	0	2	0.0			2	0.4	DMPP39
CXEGM2RC	0X007F	66	10	0.6	SYS1.VTOC.VBLD226	BLD226	8	0.4	DMPP39
CXEGN3	0X0088	5	19	0.3	SYS1.HASPACE	DMPSP2	15	0.5	DMPP24
CXEGNA	0X0087	0	20	0.0			16	1.1	DMPP12
CXEGOC	0X0084	0	10	0.0			9	0.4	DMPP39
CXEGOGW	0X008A	3	15	0.0			13	1.8	DMPP38
CXEGON	0X0083	3	19	0.5	CANDLET.XEGA.DEMOMVS.RKANMOD	DMPP39	11	0.5	DMPP28
DEVMAN	0X000F	0	0	0.0			0	0.0	
DFHSM	0X0076	11	9	0.0			4	0.5	DMPP24
DFRMM	0X0024	1	4	0.3	COMMON.RMM.CONTROL.DATA	DMPCOM	2	0.3	DMPRES
DLF	0X0022	0	0	0.0			0	0.0	
DUMPSRV	0X0005	0	4	0.0			2	0.3	DMPRES
NETVIEW	0X007D	1476	94	1.8	IMS.V11R1.SDFSRESL	DMPP38	40	1.8	DMPP38
NETVIO3	0X008E	0	3	0.0			3	0.5	DMPP24
NETVSSI	0X0073	0	1	0.0			1	1.1	DMPP12
NETVTSO	0X0090	0	3	0.0			3	0.4	DMPP19
NETVTSO1	0X008C	0	3	0.0			3	0.4	DMPP19

Complete your sessions evaluation online at [SHARE.org/BostonEval](https://www.share.org/BostonEval)

Situation Correlation Create Initial Situation



Situations for - Application Summary

Formula

Name: Sample Application Active Summary

Description: Monitor for Application

	Application	Dataset Count
1	* == 1,DUMP	> 1
2		
3		

Dataset Count: Represents the total number of data sets allocated to this application in this address space. You can enable aggregation for this attribute in Tivoli® Data

Situation Formula Capacity: 11%

Sound: Enable informational.wav

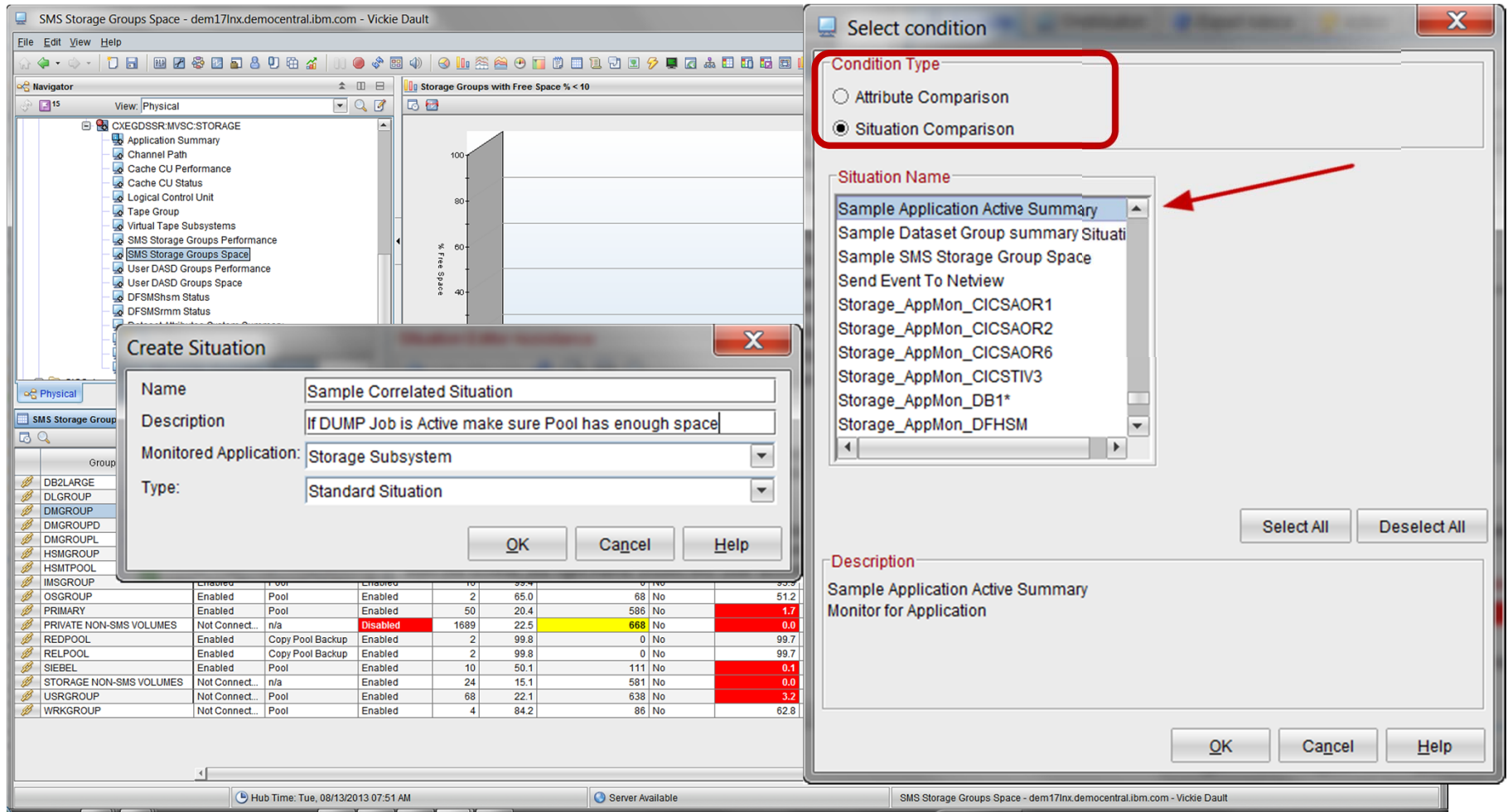
State: Informational

Run at startup

OK Cancel Apply Group... Help

Sample_Application_Active_Summa

Situation Correlation Create Situation (correlate to first)



The screenshot shows the IBM Spectrum Control interface with two dialog boxes open. The 'Create Situation' dialog is in the foreground, and the 'Select condition' dialog is in the background.

Create Situation Dialog:

- Name: Sample Correlated Situation
- Description: If DUMP Job is Active make sure Pool has enough space
- Monitored Application: Storage Subsystem
- Type: Standard Situation

Select condition Dialog:

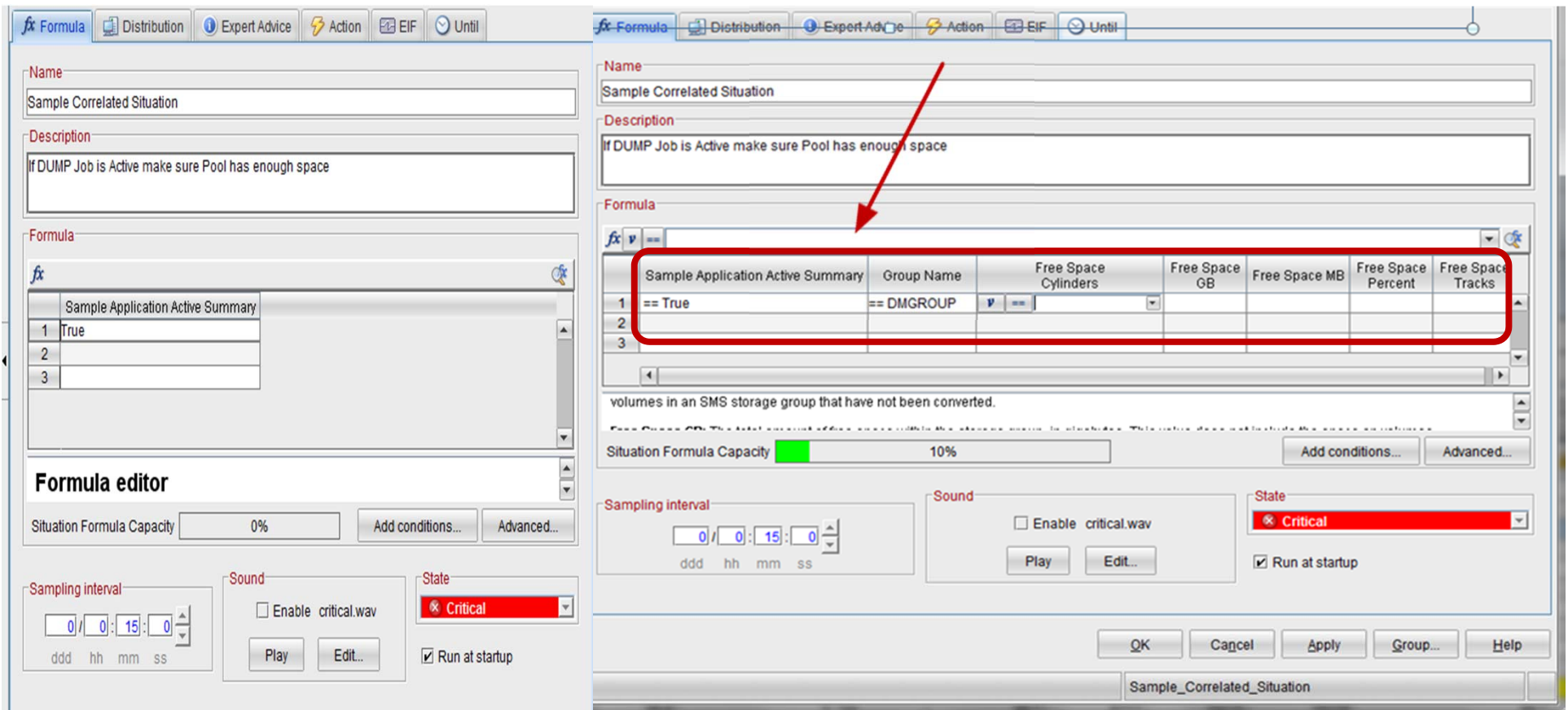
- Condition Type: Situation Comparison
- Situation Name: Sample Application Active Summary (highlighted with a red arrow)
- Description: Sample Application Active Summary Monitor for Application

Background Interface:

The background shows the 'SMS Storage Groups Space' window with a tree view on the left and a table of storage groups. The table has columns for Group, Enabled, Pool, and various performance metrics.

Group	Enabled	Pool	Enabled	10	35.4	0	No	35.2
OSGROUP	Enabled	Pool	Enabled	2	65.0	68	No	51.2
PRIMARY	Enabled	Pool	Enabled	50	20.4	586	No	1.7
PRIVATE NON-SMS VOLUMES	Not Connect...	n/a	Disabled	1689	22.5	668	No	0.0
REDPOOL	Enabled	Copy Pool Backup	Enabled	2	99.8	0	No	99.7
RELPOOL	Enabled	Copy Pool Backup	Enabled	2	99.8	0	No	99.7
SIEBEL	Enabled	Pool	Enabled	10	50.1	111	No	0.1
STORAGE NON-SMS VOLUMES	Not Connect...	n/a	Enabled	24	15.1	581	No	0.0
USRGROUP	Not Connect...	Pool	Enabled	68	22.1	638	No	3.2
WRKGROUP	Not Connect...	Pool	Enabled	4	84.2	86	No	62.8

Situation Correlation Create Situation (correlate to first)



Name: Sample Correlated Situation

Description: If DUMP Job is Active make sure Pool has enough space

Formula:

	Sample Application Active Summary	Group Name	Free Space Cylinders	Free Space GB	Free Space MB	Free Space Percent	Free Space Tracks
1	== True	== DMGROUP	v ==				
2							
3							

volumes in an SMS storage group that have not been converted.

Situation Formula Capacity: 10%

Sampling interval: 0 / 0 : 15 : 0 (ddd hh mm ss)

Sound: Enable critical.wav

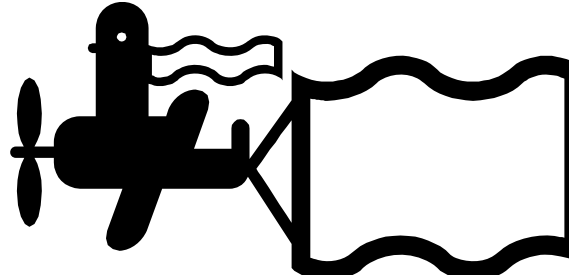
State: **Critical**

Run at startup

Buttons: OK, Cancel, Apply, Group..., Help

File name: Sample_Correlated_Situation

V5.2



What's Next

V5.2

Announcement

IBM United States Software Announcement
213-202, dated July 9, 2013



- IBM Tivoli OMEGAMON® XE for Storage V5.2

Planned Availability

- September 6, 2013: IBM Tivoli OMEGAMON XE for Storage V5.2

V5.2

IBM Tivoli OMEGAMON XE for Storage V5.2 provides new monitoring and management capabilities for VSAM Record Level Sharing (RLS), CA1 Tape Library management environments, for newer EMC storage hardware features, and new visibility into storage control unit metrics, volume operations management, and copy services information. New capabilities in IBM Tivoli OMEGAMON XE for Storage leverage IBM System z® Integrated Information Processor (zIIP) processor support to help improve CPU resource utilization.

VSAM RLS support for greater control:

- Presentation of Data set and Storage Class RLS statistics including Control Area (CA) splits and lock contention
- Report on coupling facility lock structure statistics
- Report on local buffer manager Last Recently Used (LRU) statistics

CA1 tape library support for expanding scope:

- Report on basic CA-1 tape management system statistics and configuration

Usage of zIIP processors reducing resource utilization:

continued

V5.2

- Leverages zIIP processors for calculations of volume performance data

Updated EMC storage hardware support:

- Existing EMC storage facility for the 2107

Reporting of I/O completion secondary delays for increased performance reporting:

- Additional information on the interval from the completion of an I/O until the Test Sub-Channel (TSCH) command is issued by z/OS at the volume and data set level response time

Volume operations monitoring (including copy services) provides expanded scope of monitoring:

- Show volume operations for services including Flash and Peer-to-Peer Remote Copy (PPRC) and Extended Remote Copy (XRC)
- Report on thin provisioning when in use

continued

Monitoring with OMEGAMON XE for Storage



Summary

Complete your sessions evaluation online at [SHARE.org/BostonEval](https://www.share.org/BostonEval)



Summary

- Monitor using what's already available
- Use **COLOR** for alert
- Create Situations and use the Event Indicator or Actions to inform of early warning signs
- Look forward to the next release and new features

Questions

