# Discovering OMEGAMON

# Volume 6

## OMEGAMON XE for Storage v530

## Enhanced 3270 User Interface Lab Exercises

IBM

# Contents

# Overview

**Lab Prerequisites**

This lab should not be taken unless the participant has, at a minimum, previously taken the e3270 UI Introduction lab and preferably the e3270 UI z/OS lab as well. Alternately, if the participant has previous hands-on experience with the e3270 UI, then this lab will be of value to them.

OMEGAMON XE for Storage provides the ability to monitor the various z/OS storage systems. The new, enhanced 3270(e3270) user interface, included with OMEGAMON XE for Storage v5.3, complements the existing Tivoli Enterprise Portal Server (TEPS) interface by providing the ability to monitor these various z/OS storage systems from a 3270 session. This series of exercises will illustrate several of the features and functions available in this new e3270 user interface.

Individual labs exercises will cover the following topics –

- Monitoring storage systems from a system/LPAR perspective
- Monitoring devices, DFSMShsm, DFSMSrmm and DFSMS constructs
- Identifying issues utilizing dataset attribute details

## Introduction

This lab will demonstrate how to utilize the OMEGAMON XE for Storage V5.3 enhanced 3270 user interface (e3270 UI). In this lab's exercises, the user will perform a series of exercises focused on the following:

- Monitor performance and utilization of storage systems from a high-level, subsystem view
- Monitor critical storage subsystems of DFSMShsm and DFSMSrmm as well as the various hardware devices that make up the z/OS storage systems
- Utilize the dataset attribute collection to identify files with the most significant space related issues

The lab will also demonstrate an important new feature of OMEGAMON Storage V5.3, historical data collection and viewing within the e3270 user interface.

OMEGAMON XE for Storage provides support for many of the common storage devices in use today. While other devices are supported, they are not included in this set of exercises. These exercises are performed on IBM systems that utilize IBM hardware.

## Icons

The following symbols appear in this document at places where additional guidance is available.

| Icon | Purpose | Explanation |
|---|---|---|
|  | Important! | This symbol calls attention to a particular step or command. For example, it might alert you to type a command carefully because it is case sensitive. |
|  | Information | This symbol indicates information that might not be necessary to complete a step, but is helpful or good to know. |
|  | Trouble-shooting | This symbol indicates that you can fix a specific problem by completing the associated troubleshooting information. |

# Lab 1 Monitoring Storage Performance and Space – High Level Overview

Lab 1 introduces the e3270 interface for OMEGAMON XE for Storage. This lab is performed from the default 'start' panel, KOBSTART. KOBSTART is an overview panel for all installed OMEGAMON products. The SMSplex Overview screen, which is included on KOBSTART, provides 'zoom enabled' fields into OMEGAMON XE for Storage detail displays. The lab will illustrate zooming from this start screen directly into OMEGAMON XE for Storage detailed displays. The first part of this lab will demonstrate how to identify possible response time issues and the second part of the lab will cover how to identify possible free space issues, directly from the KOBSTART screen.

Lab 1 illustrates several of the detailed displays available in OMEGAMON XE for Storage. Many of these screens can also be accessed by utilizing a different path through the product. The main purpose of this exercise is to demonstrate how to do high-level storage monitoring from the main/overview OMEGAMON screen, KOBSTART.

**Security Information!**

Prior to starting these exercises, please see the instructor for user ID/password and logon instructions.

**Screen Size and Presentation Display**

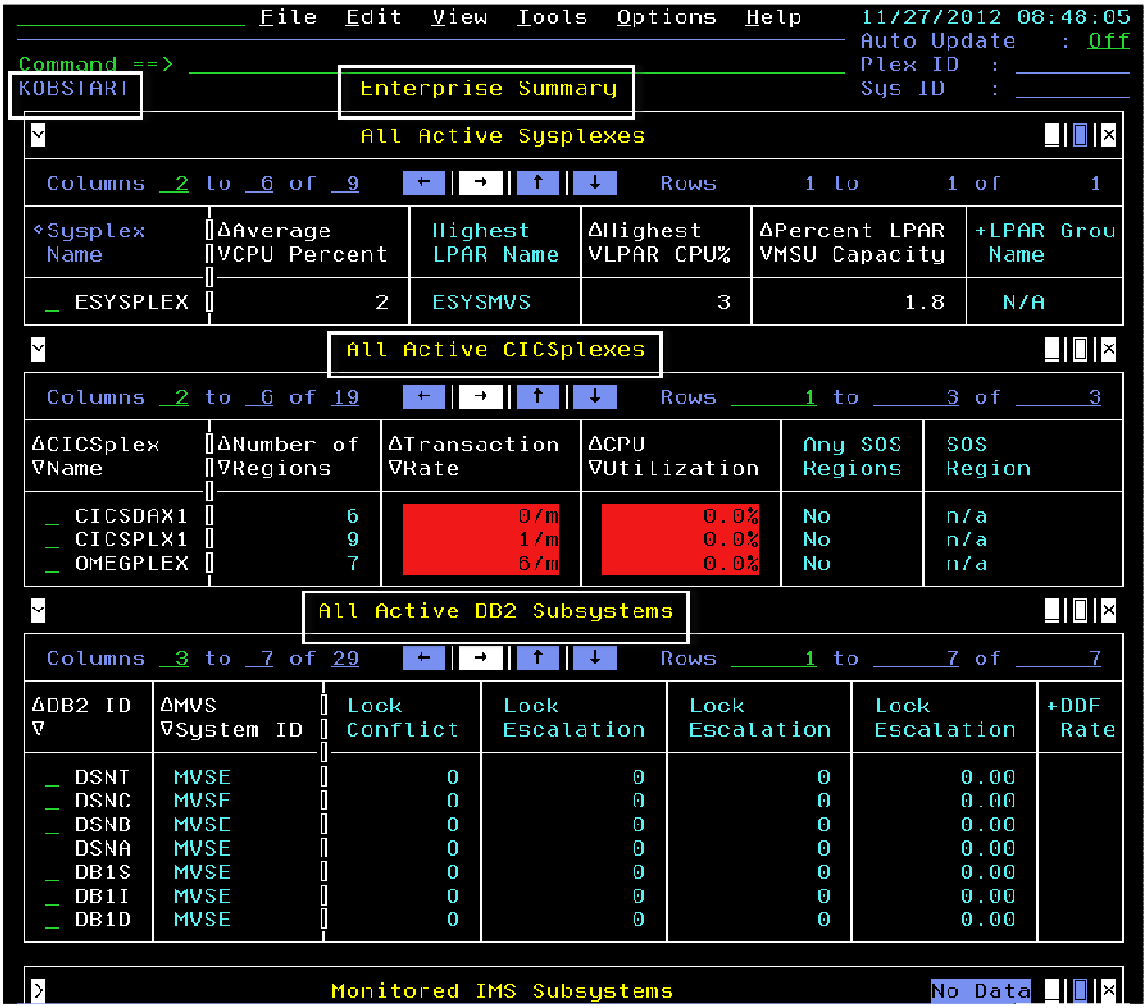
The sample product displays in this lab were created with a screen size of 43x80. The IBM Personal Communications Session Manager sessions utilized in this workshop have been pre-configured with a screen size of 43x80, but may be modified allowing for more or less data to be displayed on each screen. Depending on the screen size in use, the product displays shown on your monitor may appear different than the examples in this lab.

## 1.1 View Storage Performance from Enterprise Summary

__1. Sign on to the e3270 UI.

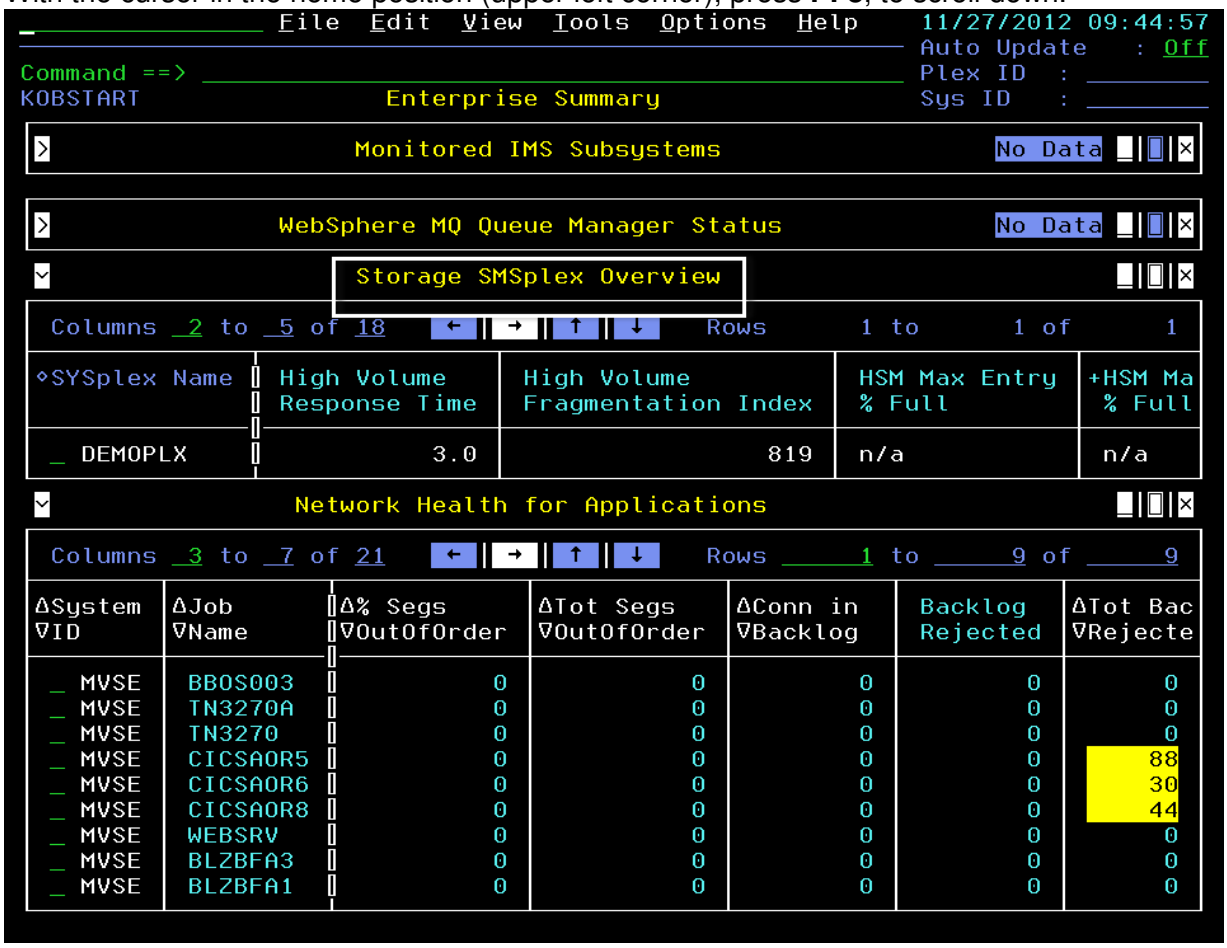
Enter the User ID and Password provided by the instructor and press **ENTER**.

This is the default initial screen, the **Enterprise Summary**, KOBSTART, which displays a high-level overview from each of the installed OMEGAMON products.



__2. Locate OMEGAMON XE for **Storage SMSplex Overview** on Main Menu (KOBSTART)

With the cursor in the home position (upper left corner), press **PF8**, to scroll down.

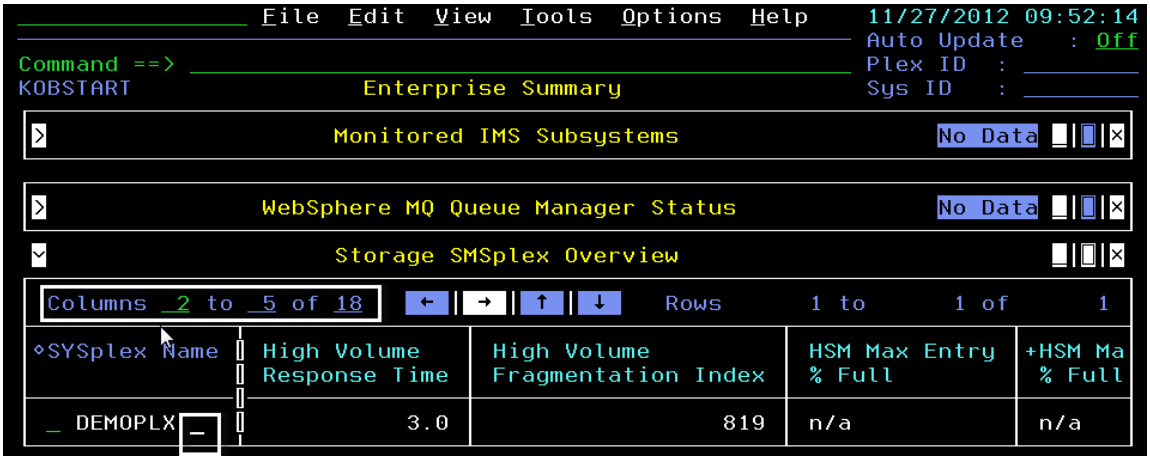



Locate the **Storage SMSplex Overview**. An SMSplex is a group of one or more systems that share a common storage management subsystem (SMS) configuration. This section provides you with one row of data for each SMSplex. Each row will contain the worst values from all monitored systems within that SMSplex.

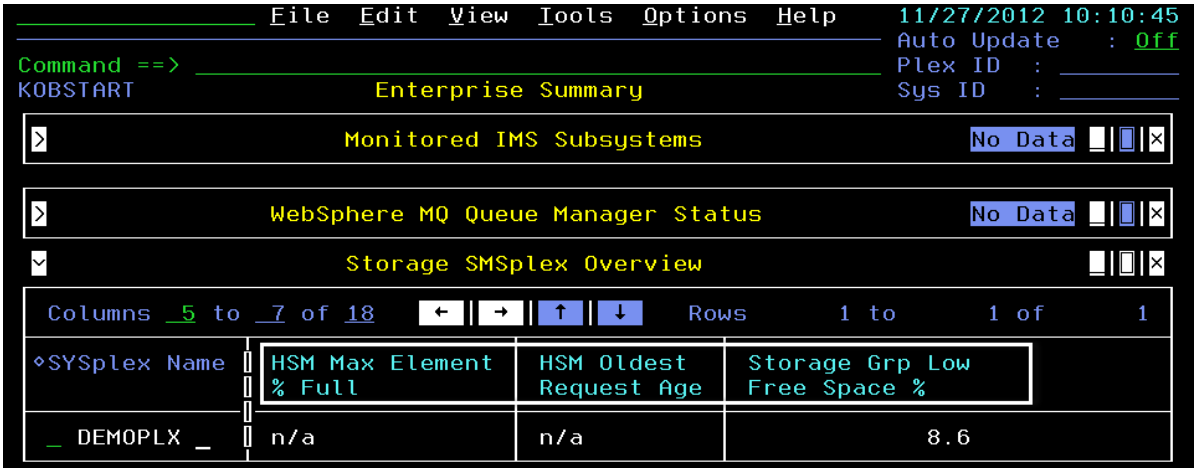
__3. Review Storage Key Performance Indicators (response time and storage metrics).

This overview screen displays key performance and space related metrics that represent the 'worst' values from all monitored systems. Abnormal values in any of these metrics could be an indicator of an impact to overall transaction throughput and/or end-user response times and would be flagged as an exception.

Additional overview data is available as indicated by the number of columns being displayed.



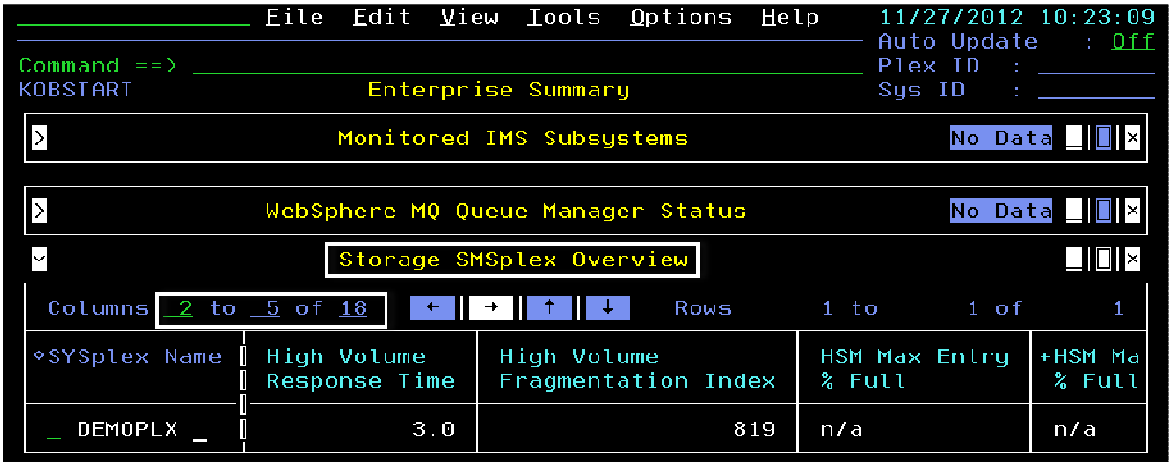

Place the cursor anywhere inside this section and press **PF11** to scroll right.




The next set of storage related attributes is displayed. You can continue to review additional data by scrolling right by pressing **PF11**.

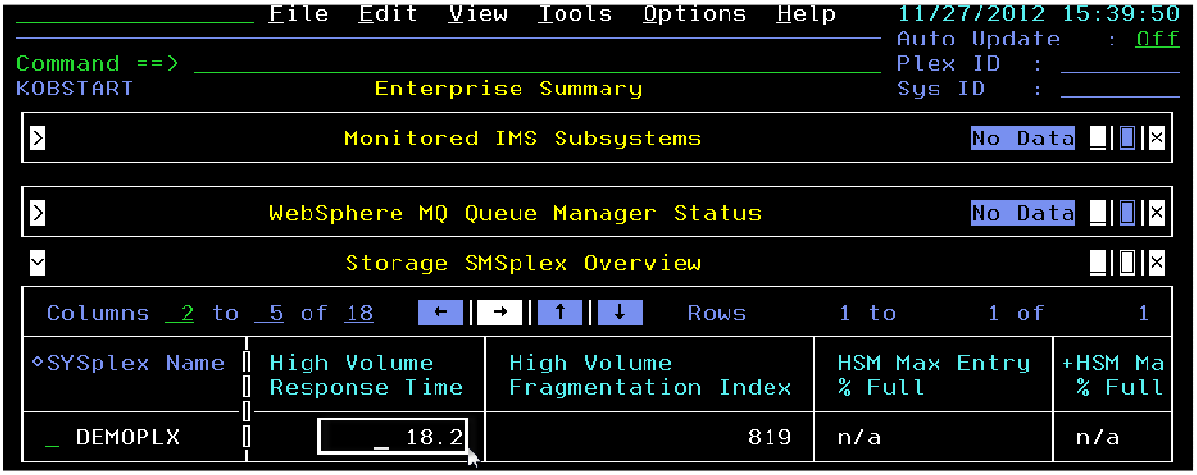
After reviewing the available performance and storage metrics provided on this main screen, please scroll back to the left by pressing **PF10** until column 2 is shown.

You should now be back to this screen position:

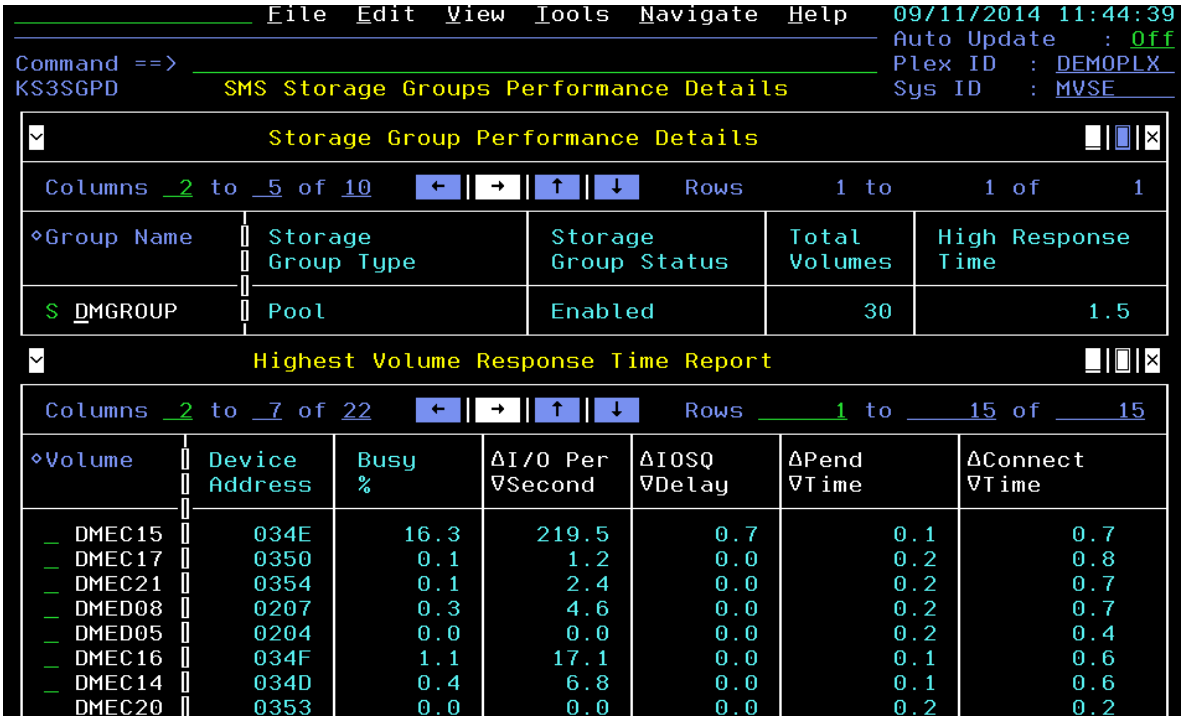



__4. View device and dataset performance related data

Place the cursor in the '**High Volume Response Time**' column as shown below and press ENTER.



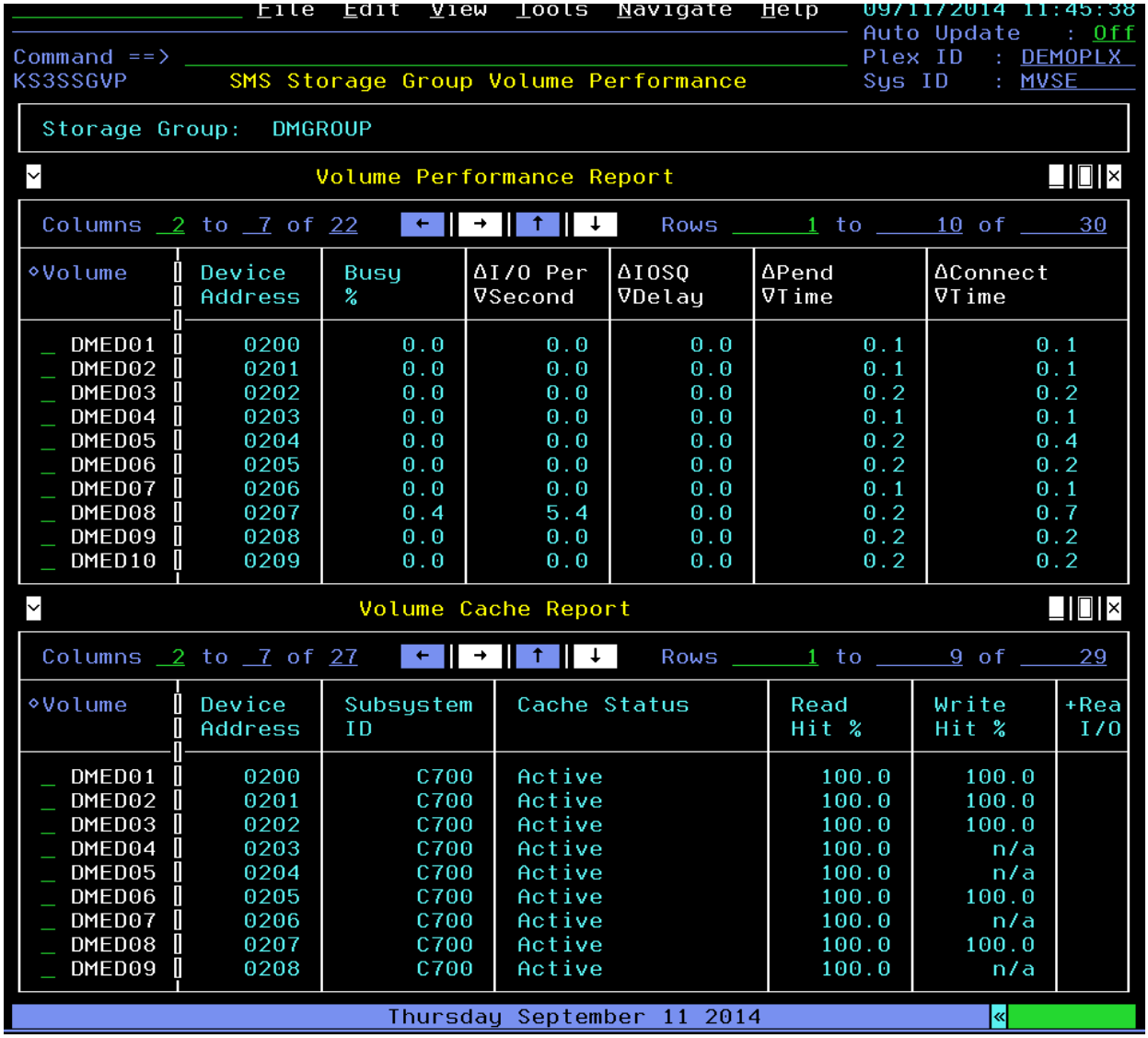
The Storage Group and the associated volumes with the highest response times are shown. You may see a different Storage Group and volumes than those shown below due to the dynamic nature of the workload.




Place an – **S** - next to the **Storage Group** name and press **ENTER**.

__5. Review Storage Group volume performance

All volumes associated with the selected Storage Group are now available.

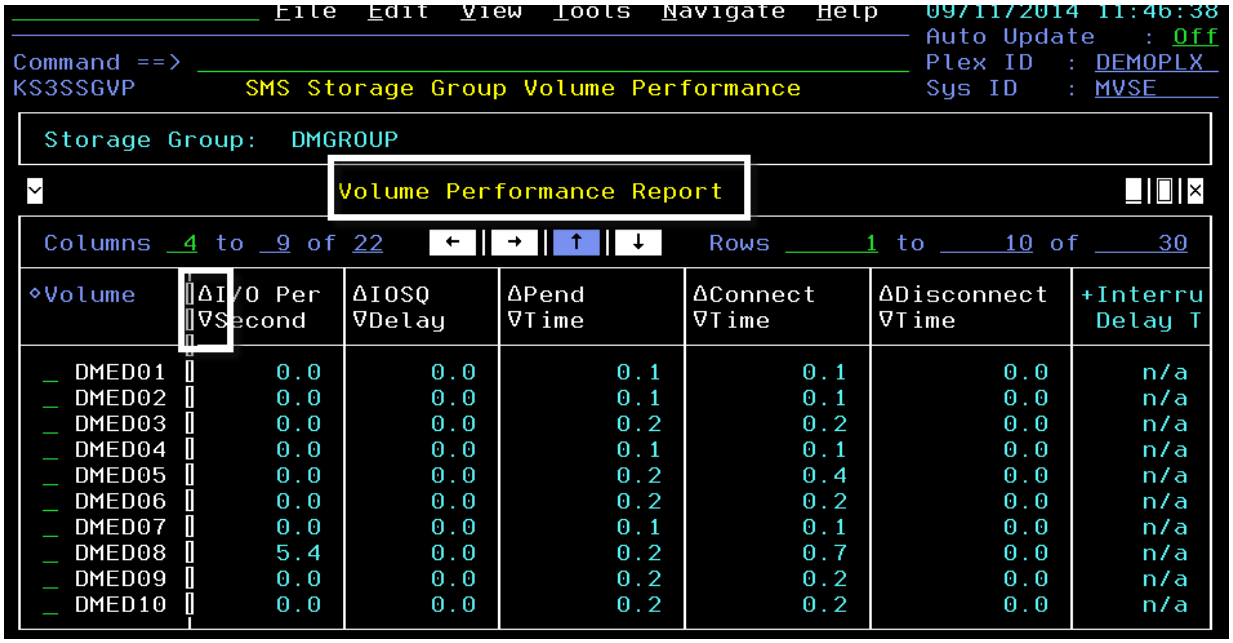



In order to view and sort the performance related metrics, assuming the default screen size is being used, position your cursor in the Columns field, place a – **4** - in this field and press **ENTER**.

__6. Locate a 'busy' volume

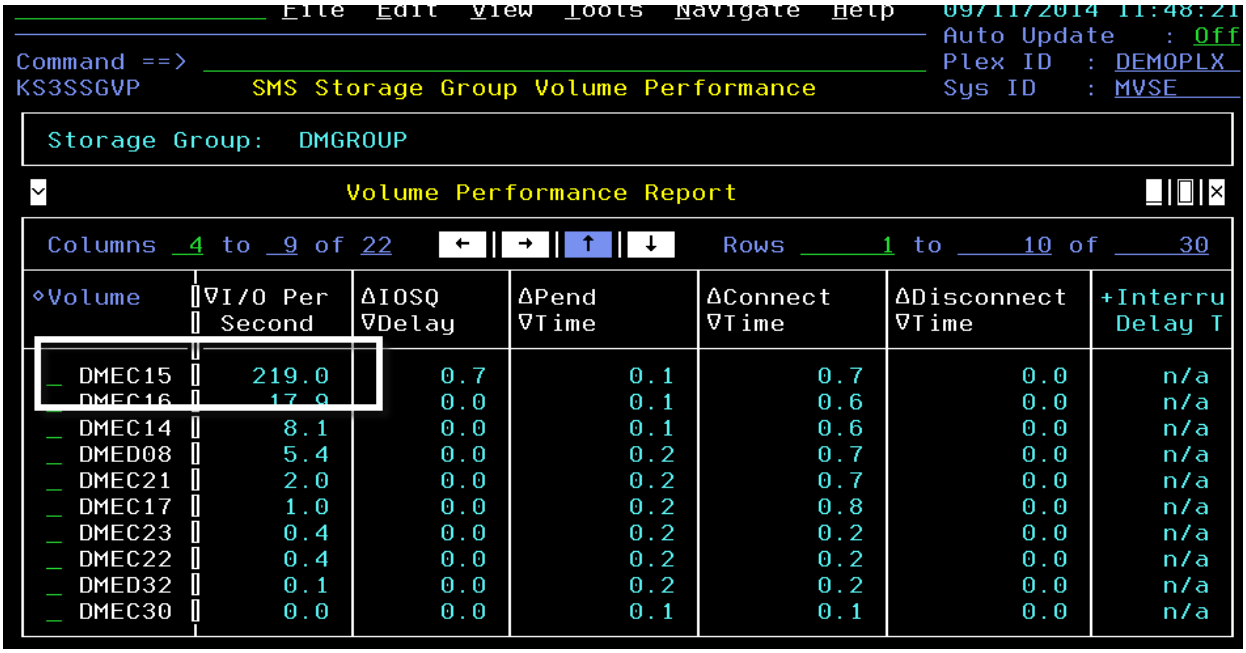
Notice that there are several volume performance related metrics now displayed. It is possible to sort any of these fields to identify volumes that may be experiencing performance issues. Additional metrics are also available and many be viewed by continuing to scroll right with **PF11**.

For this lab, we are going to identify the busiest volumes within this storage group. Notice the 'arrows' in the column headings of the **Volume Performance Report**.

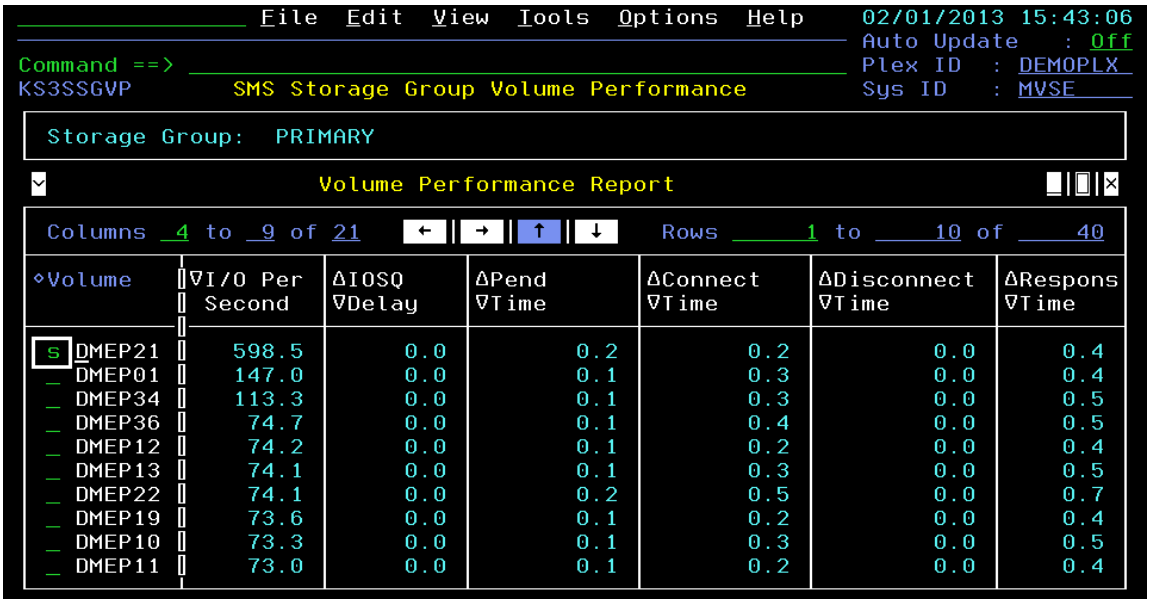



Place the cursor on the arrow of the '**I/O Per Second**' column header and press **ENTER** to sort the volume list by this field. Leaving the cursor in this position and pressing **ENTER** again will sort the field in the opposite manner.

For this lab, please locate the volume with the highest I/O rate, as shown below




__7. Display active datasets on a volume




Place an – **S** - next to the busiest volume and press **ENTER**.

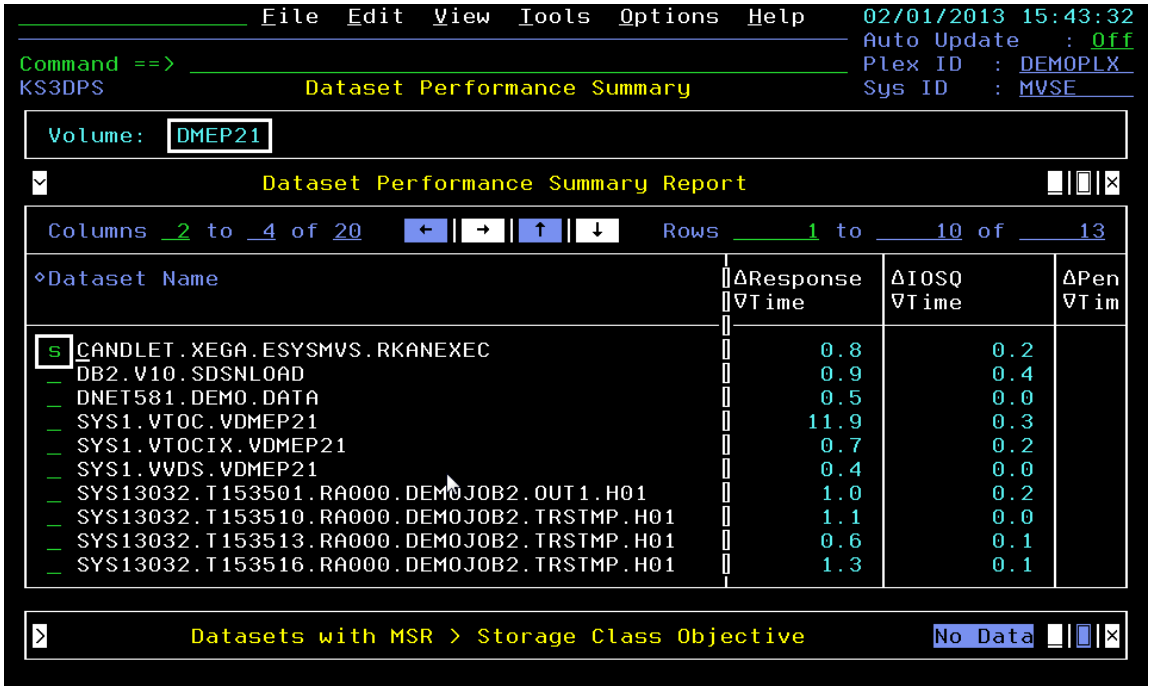
__8. View volume dataset performance

**Active Datasets**

This step will be more meaningful if a volume with several active datasets is selected, as shown below. If the selected volume does not show dataset activity, try selecting different volumes by pressing PF3 to return to the prior screen. Depending on the level of system activity, this data may not always be available.

The active dataset and their performance on the selected volume are shown. You will likely see different dataset(s), depending on the volume selected on the prior screen.

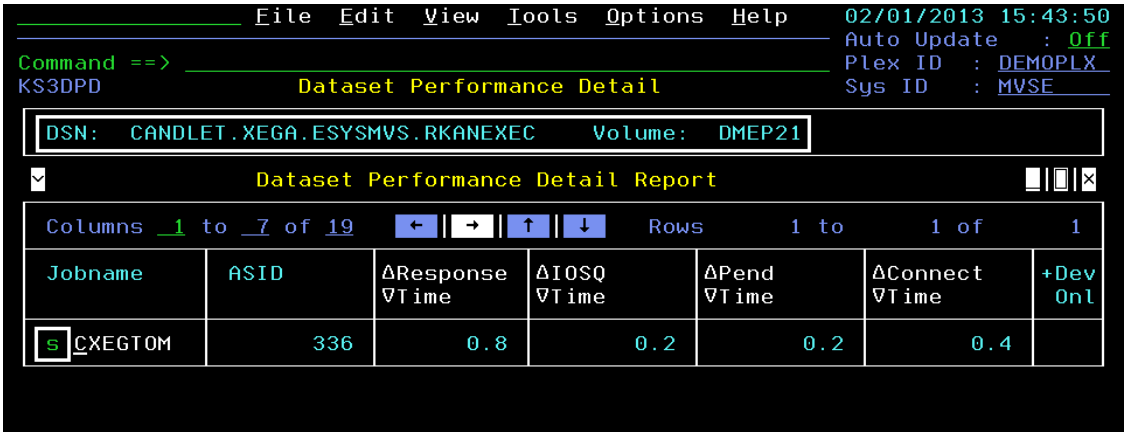
Notice that sorting for the dataset performance related information is available. You are able to scroll and sort this display in a similar manner as the **Volume Performance Report**, allowing you to identify files on this volume that are heavily used. For this exercise, we will drill down on one of the displayed datasets.




Place an – **S** - in the field next to one of the datasets and press **ENTER.**

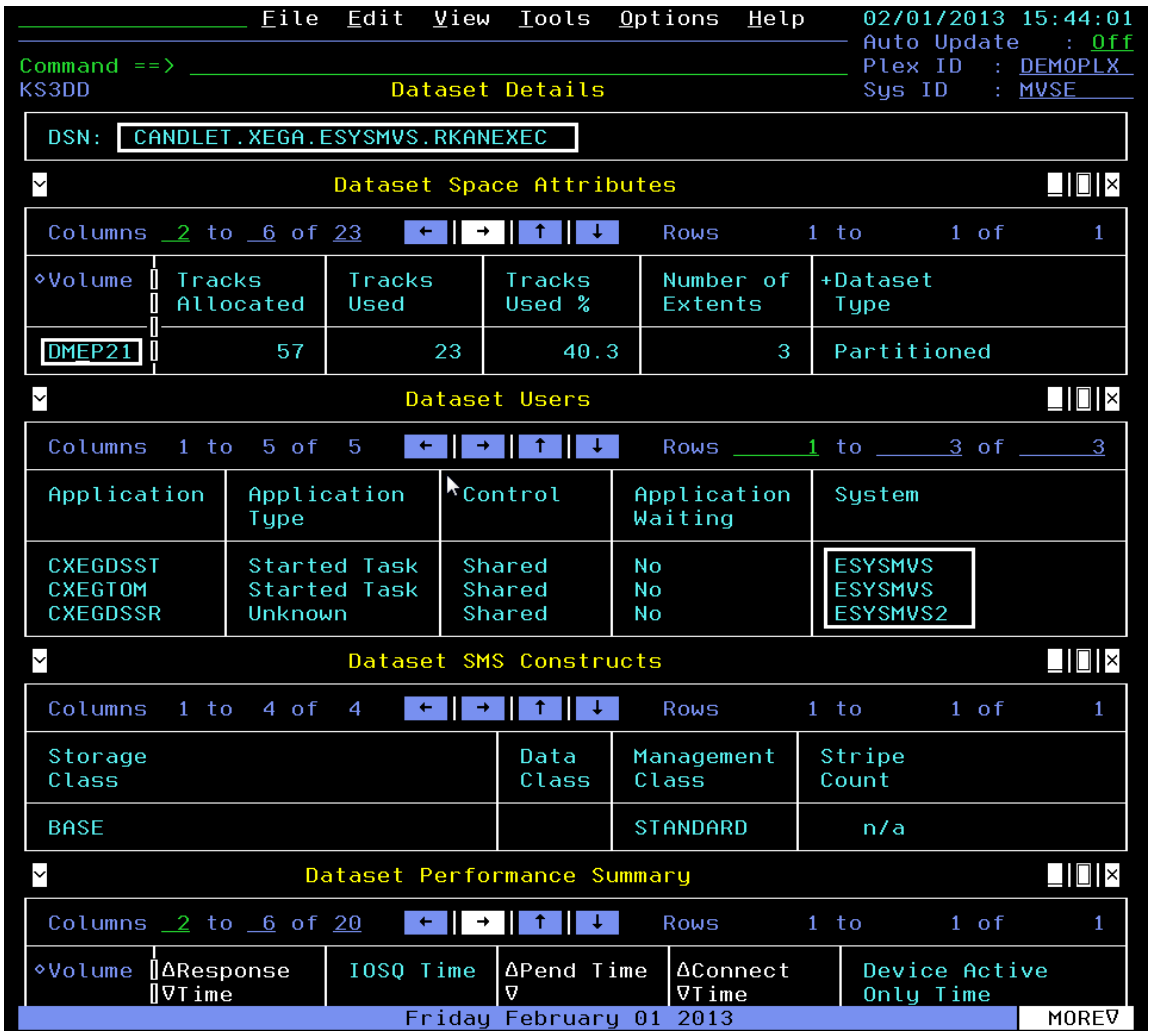
__9. View Volume Dataset Usage

This display shows which jobs/tasks are currently using the selected file. You may see different task(s), depending on the dataset selected on the prior screen. There will be one entry for each job/task that is accessing this file.




Place an – **S** - next to the job/task as shown and press **ENTER.**

For a given volume and dataset, all jobs/tasks that have this file allocated are displayed. The display below shows tasks from other systems have this dataset allocated and could be impacting I/O performance for this volume. Further investigation could be necessary.



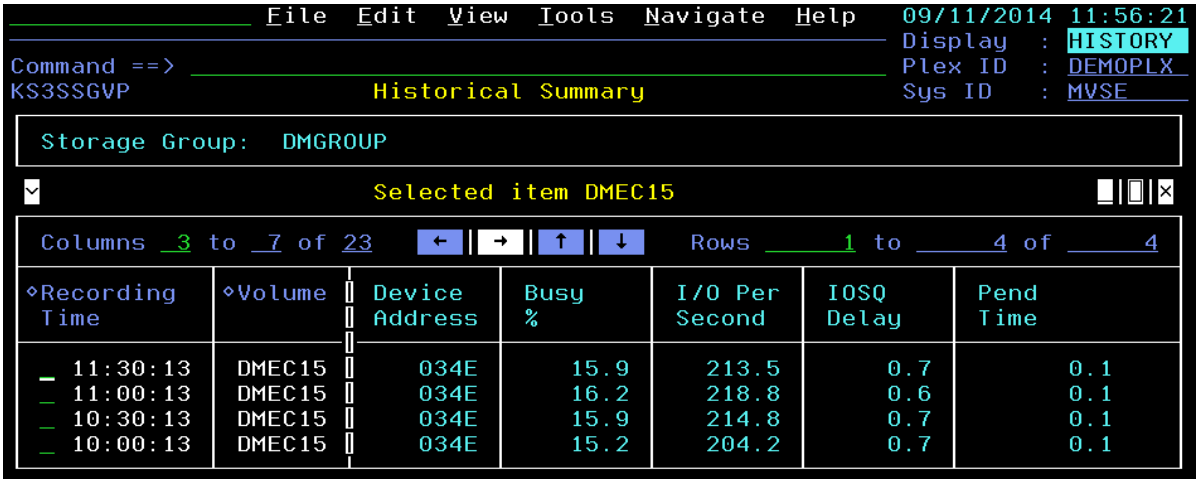

**Press F3** until you return to panel KS3SSGVP

## 1.2 Displaying Volume Level History (New in V5.3)

This exercise will demonstrate how you may view historical performance information within the e3270 user interface.

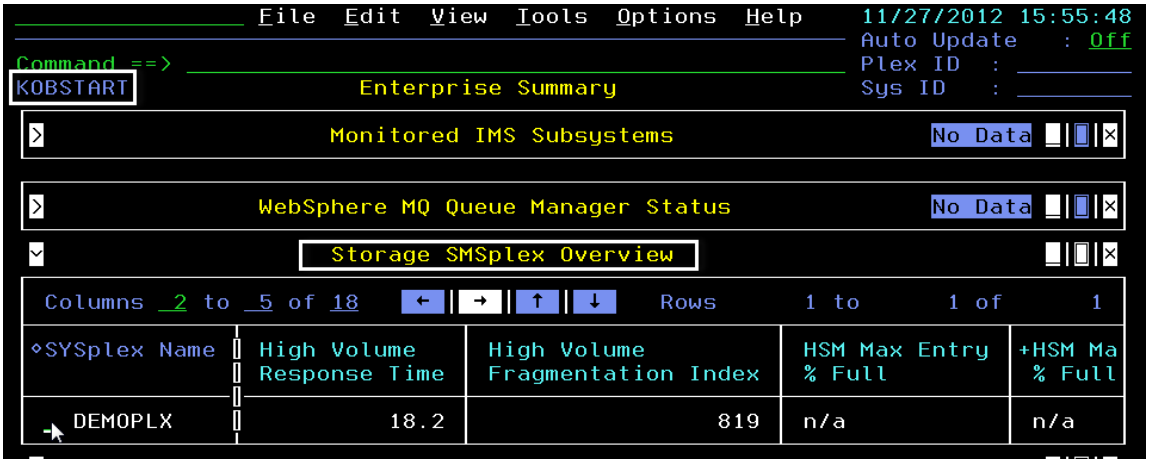
__1. From KS3SSGVP request history

**Position the cursor** next to one of the high usage volumes. **Enter H** and **Press Enter.**



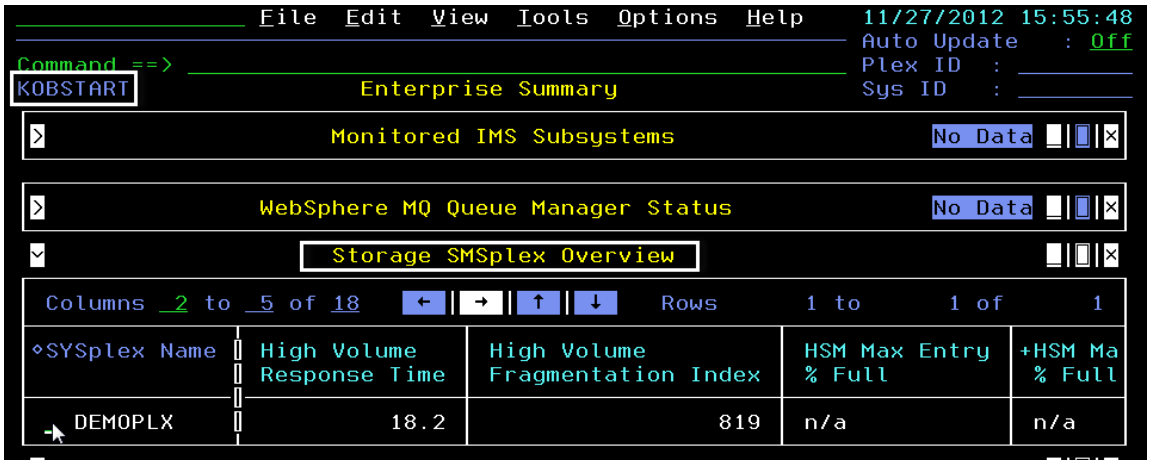

You are now looking at the I/O and % busy history for the chosen volume. You may **Press F11** to scroll to see additional information columns.

Press **PF3** three times to return to the **Enterprise Summary** screen, KOBSTART.



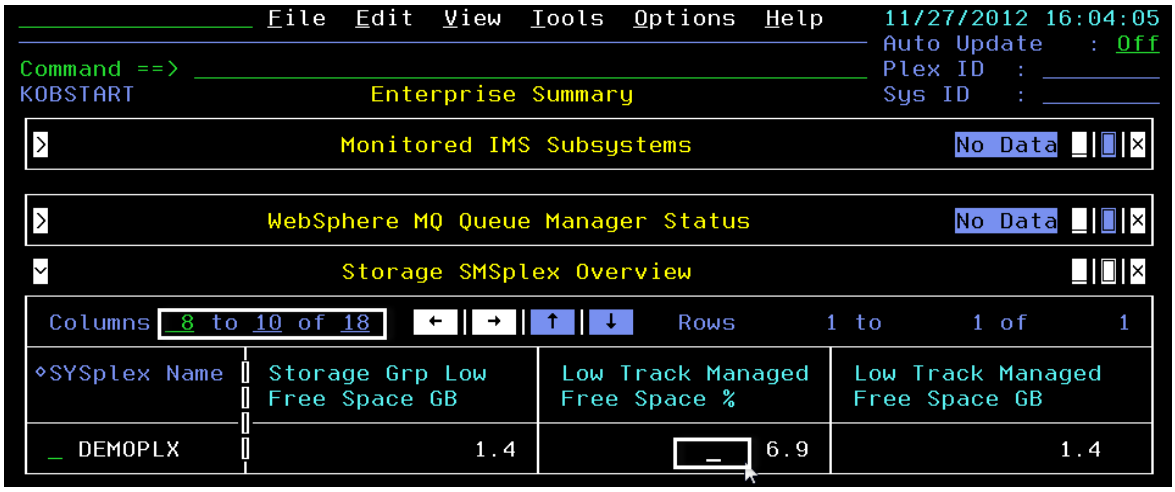

## 1.3 View Storage Data from Enterprise Summary

__1. View disk space related data




From the KOBSTART screen, place the cursor on somewhere in the **Storage SMSplex Overview** section.

Press **PF11** (twice, if using the default screen size) to scroll right until you see the '**Low Track Managed Free Space %**' column.

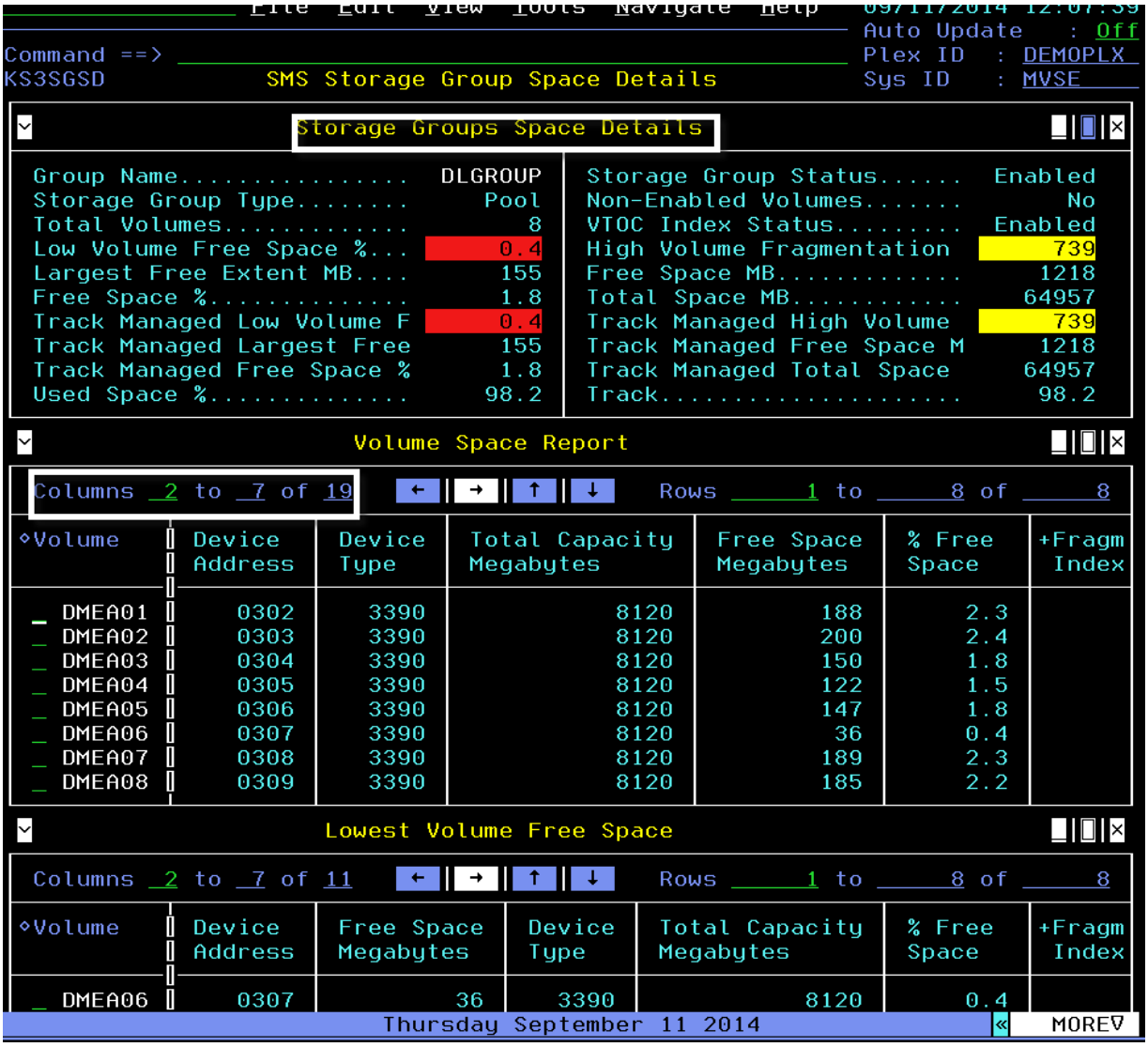



Place your cursor anywhere in this column and press **ENTER.**

__2. View Storage group and volume space

Space related details for the specific Storage Group and the volumes in this group are shown. You will likely see a different Storage Group and volumes than those shown below due to the dynamic nature of the workload.

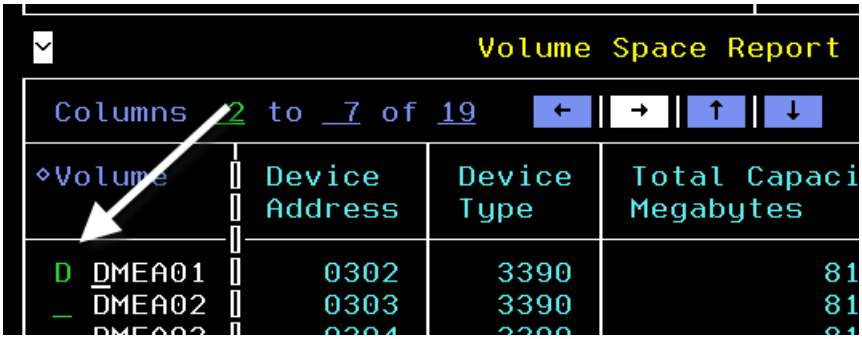
Note there are additional volumes and data available. Placing the cursor anywhere in the 'Volume Space Report' window and scrolling down (PF8) and/or right (PF11) will display this data. Additionally, you can view a list of datasets on each volume by placing an –S- next to a specific volume. Finally, the message at bottom right corner indicates more data is available.




To view this additional data, with the cursor in the home position (top left), press **PF8** to scroll down.

__3. View devices with low free space

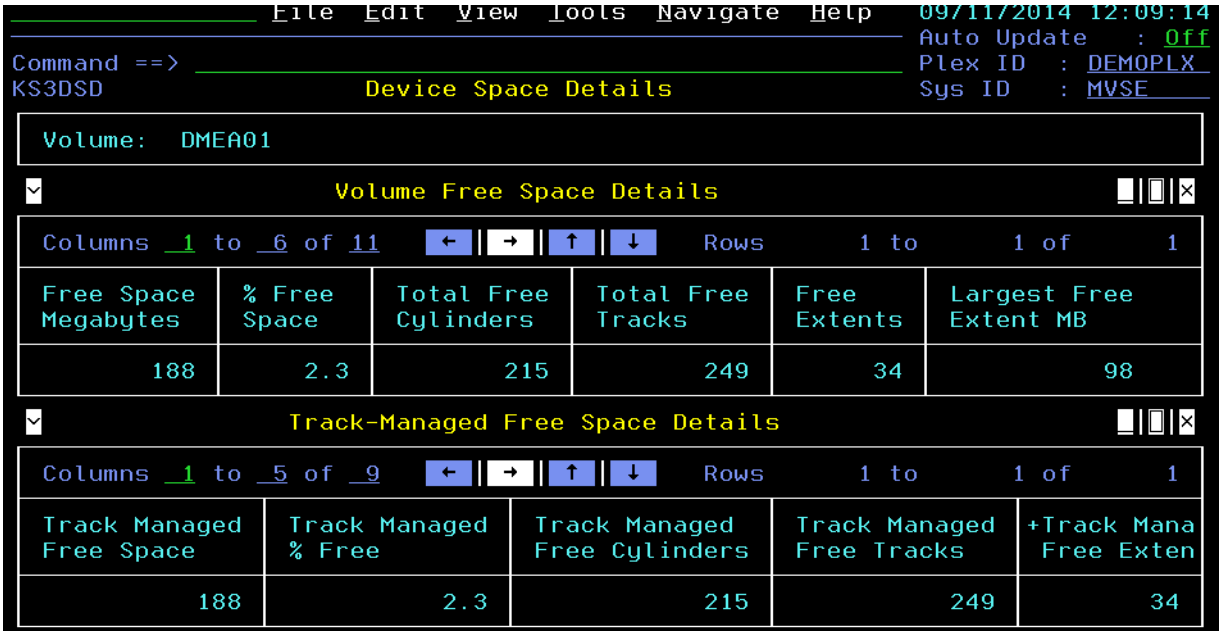
Devices in the storage group sorted by lowest free space and lowest free space percent are shown making it easy to identify volumes running low on space. Depending on the Storage Group selected and which screen size is being used, a different number of volumes may be displayed.




For this exercise, place an – **D**- next to a device and press **ENTER**, to get additional details for this device. Note that you are also able to view datasets on each volume, but is not shown as part of this lab.

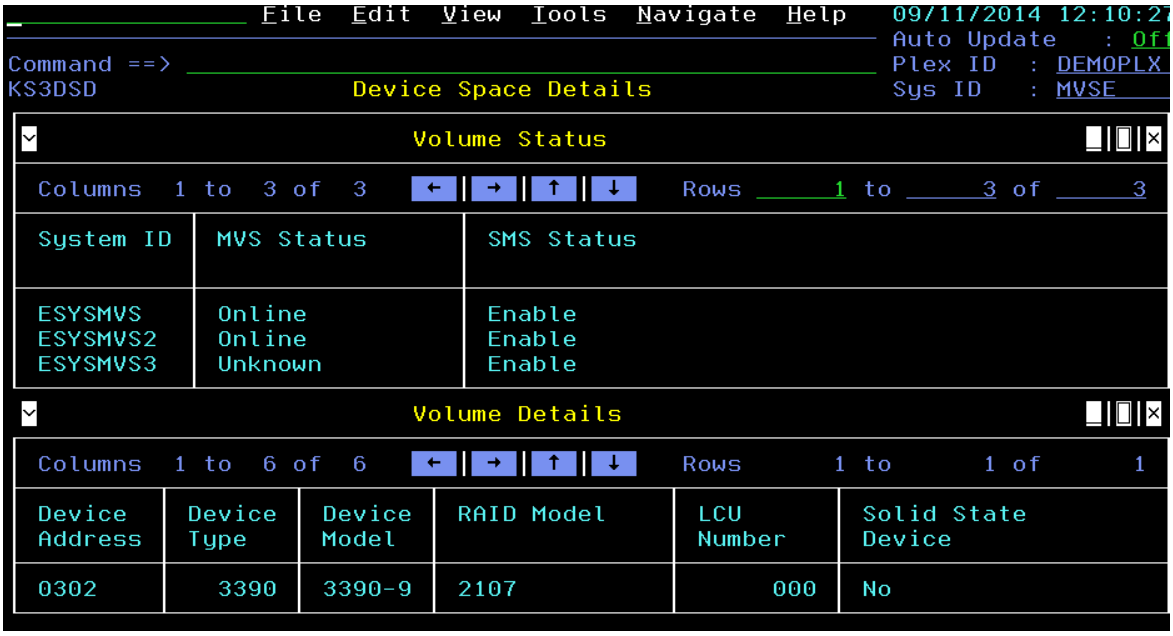
__4. View device details

Review the device details that are shown for the selected device. Note the bottom left corner, more data is available.

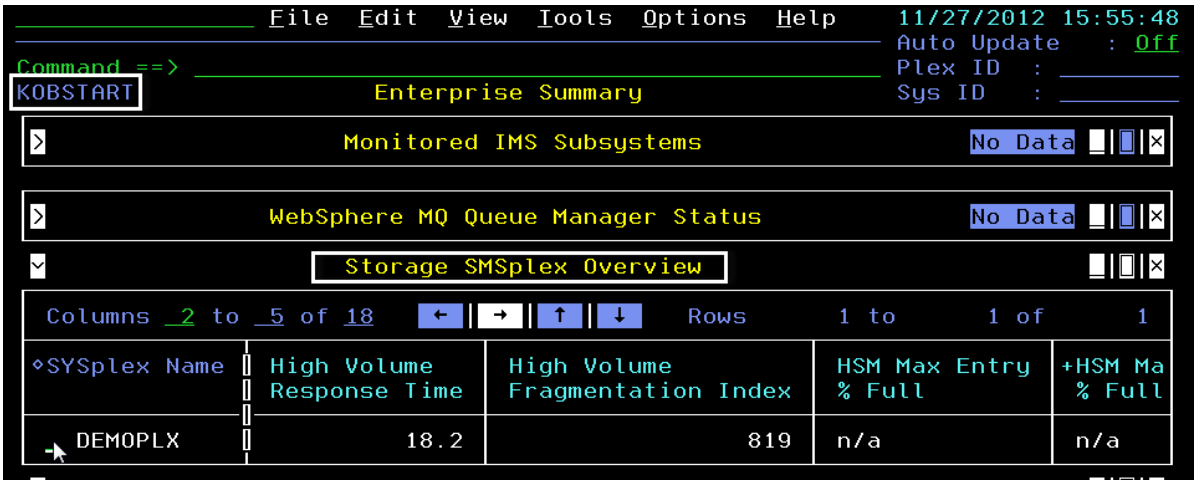



With the cursor in the home position (top left), press **PF8** to scroll down to see additional device details including which systems have the device allocated and the device model.

Additional device details are shown below.




Press **PF3** twice to return to the **Enterprise Summary** screen, KOBSTART.




This concludes Lab 1, Monitoring Storage – High Level Overview.

# Lab 2 View Device and Storage Subsystem Data

Lab 2 continues to explore the e3270 interface details. This lab will explore how OMEGAMON for Storage monitors devices and the storage subsystems of DFSMShsm, DFSMSrmm and DFSMS.

Lab 2 illustrates several of the displays available in OMEGAMON XE for Storage that can be used for managing the hardware and storage subsystem. The main purpose of this exercise is to demonstrate the breadth and depth of the various hardware and storage subsystem monitoring displays.

## 2.1 View Hardware/Device Data

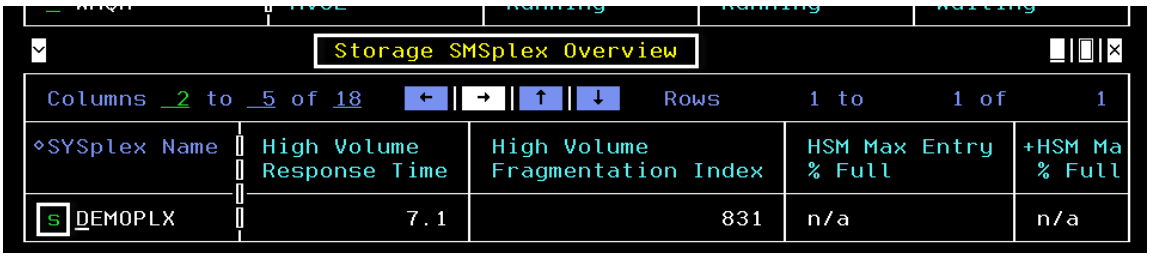
**Pre-staged exercise tasks**

These exercises are being performed on IBM systems which utilize IBM hardware. While not covered during this lab, OMEGAMON XE for Storage provides hardware metrics for other OEM storage devices.

In this Lab, the participants will view information for control units, along with various disk and tape information provided by OMEGAMON XE for Storage.

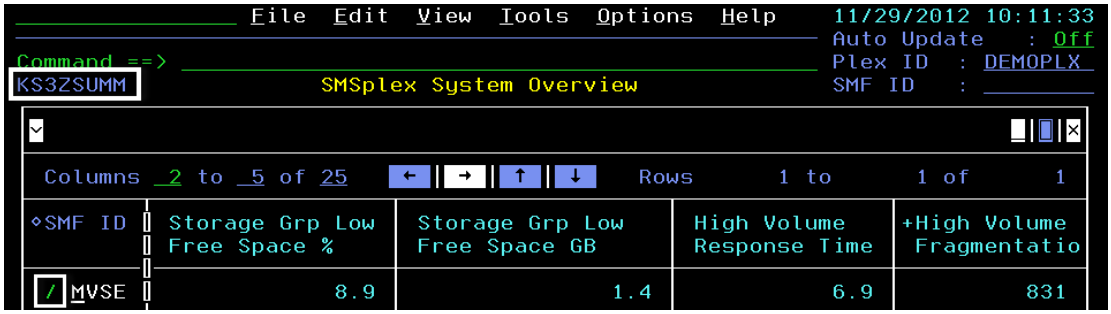
__1. Locate OMEGAMON XE for Storage on the Enterprise Summary (KOBSTART). Please see step 2 from Lab 1 for instructions for locating this section of the display.

__2. Zoom into the OMEGAMON for Storage product home screen and display available options



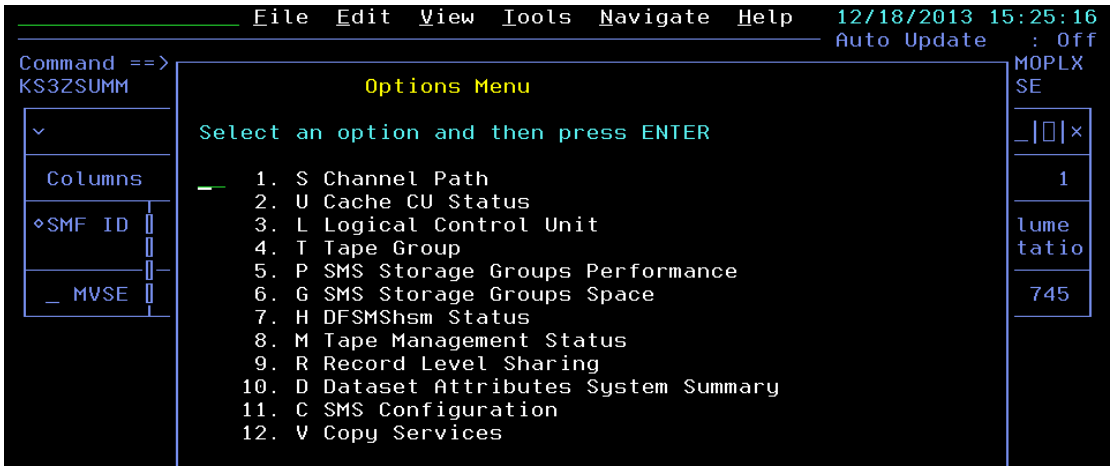

Place an – **S** - next to the Sysplex name and press **ENTER.**

The SMSplex System Overview(KS3ZSUMM) is displayed.



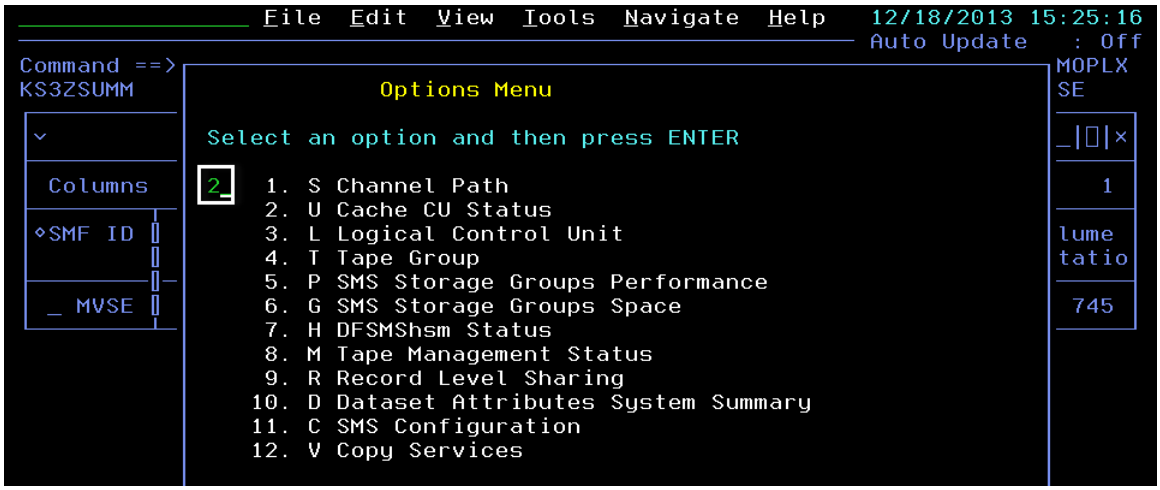

Place a slash ( / ) next to the **SMF ID** name and press **ENTER.**

The menu options available are displayed.



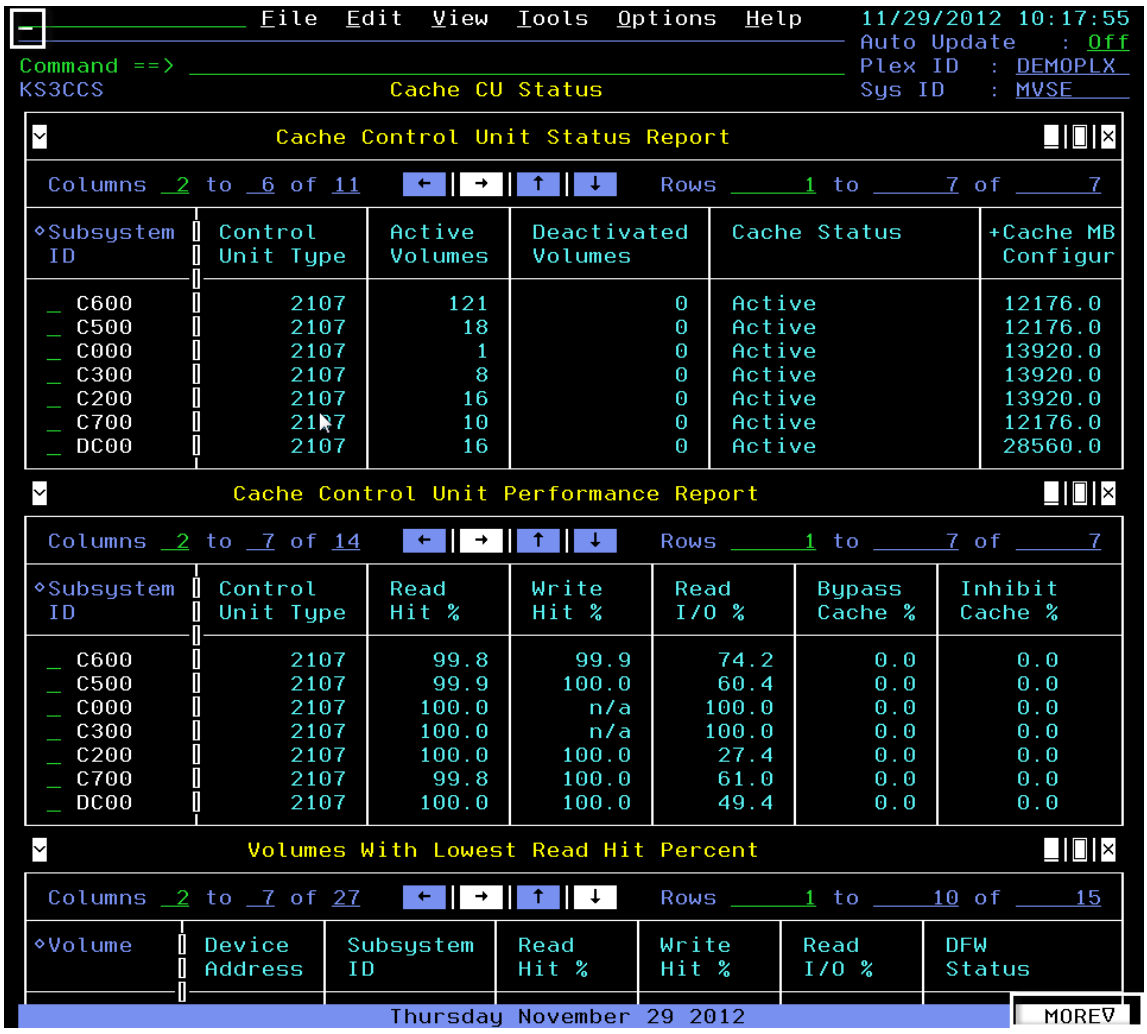

__3. Review Cache Control Unit Status

This menu provides options to review the state and status of the various hardware and software that make up the storage subsystem. Several of these options will be explored in this lab, beginning with the status of the **Cache Control units**.



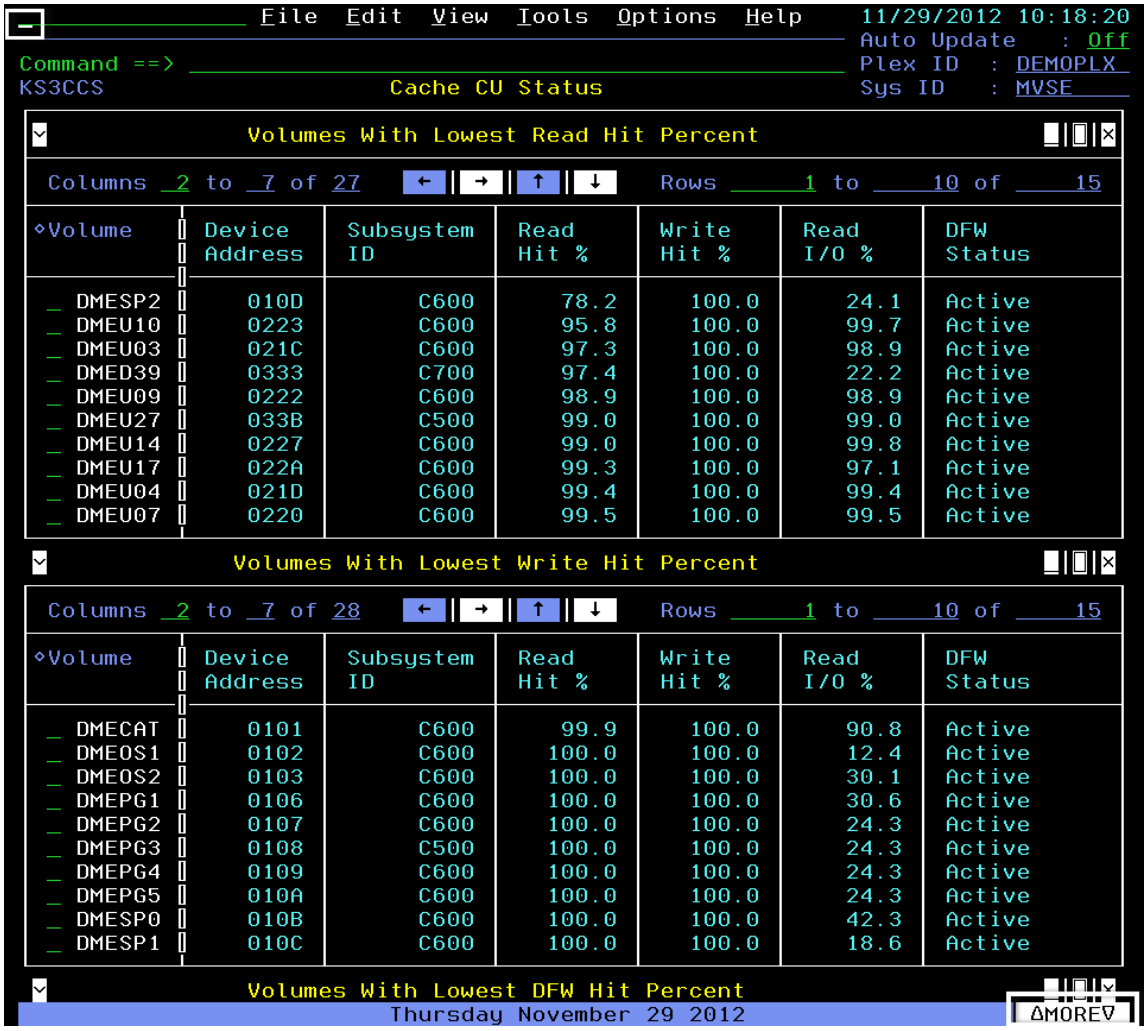

Select option – **2** - and press **ENTER.**

The various control units are displayed. This display provides several different status and performance views, of the control units. Note that there is additional data available, as indicated in the lower right corner of the display.




With the cursor in the 'home' position (upper left corner), press **PF8** to view additional control unit performance data.

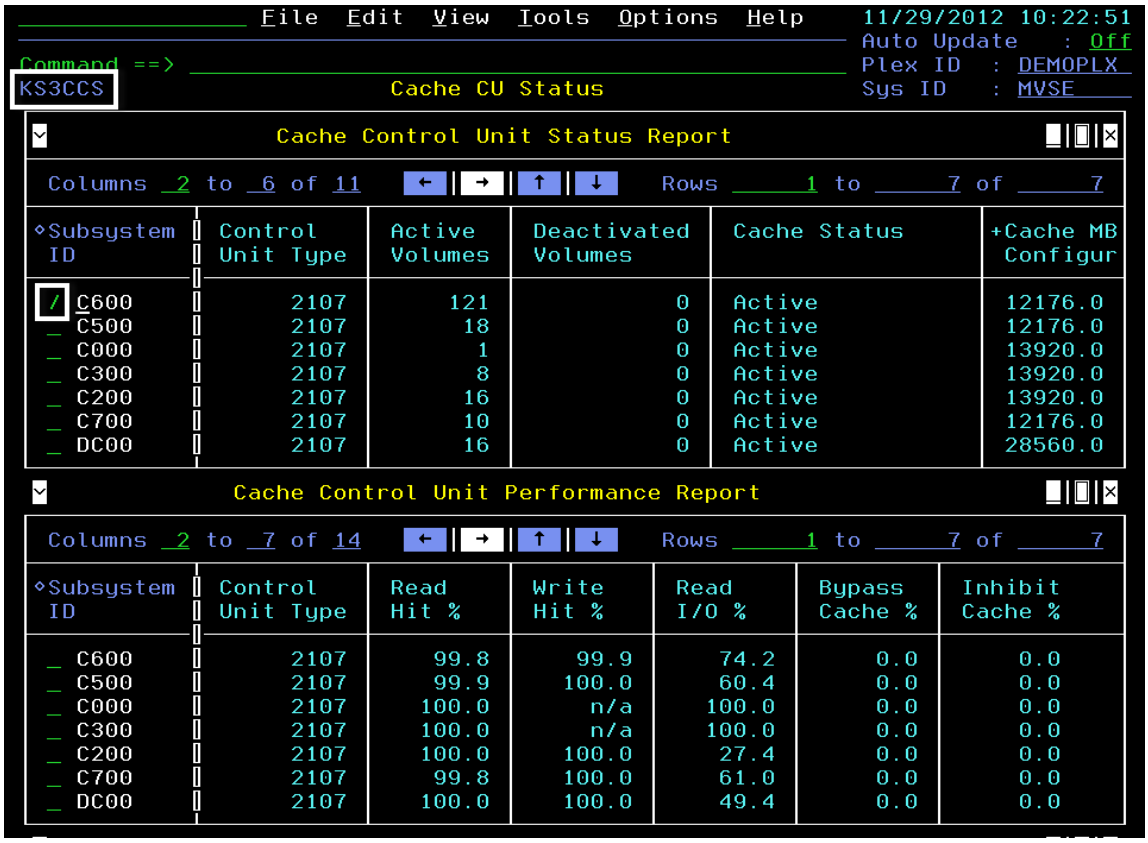
More **control unit** statistics (read and write), are displayed. The lower right corner of the screen indicates there is additional control unit data available.




Feel free to scroll down using **PF8** to view the remaining control unit data. After reviewing the data press **PF7** the appropriate number of times to return to this screen. From the screen shown above, press **PF7** (two times, if using the default screen size) to return to the **Cache CU Status** screen (KS3CCS).

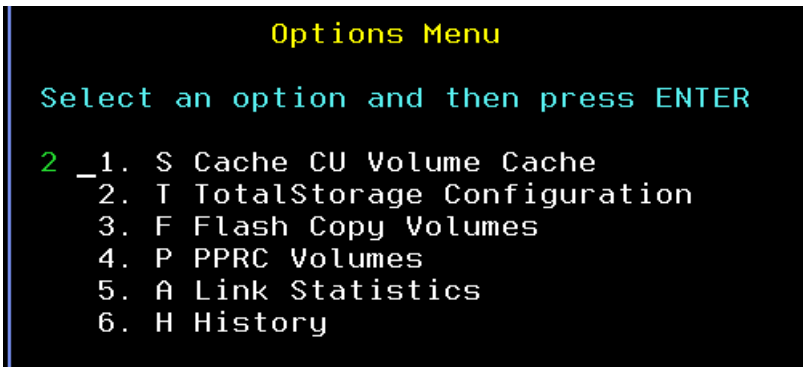
__4. Review Storage Hardware Information

OMEGAMON XE for Storage provides information for IBM hardware along with commonly used hardware from 3rd party vendors.



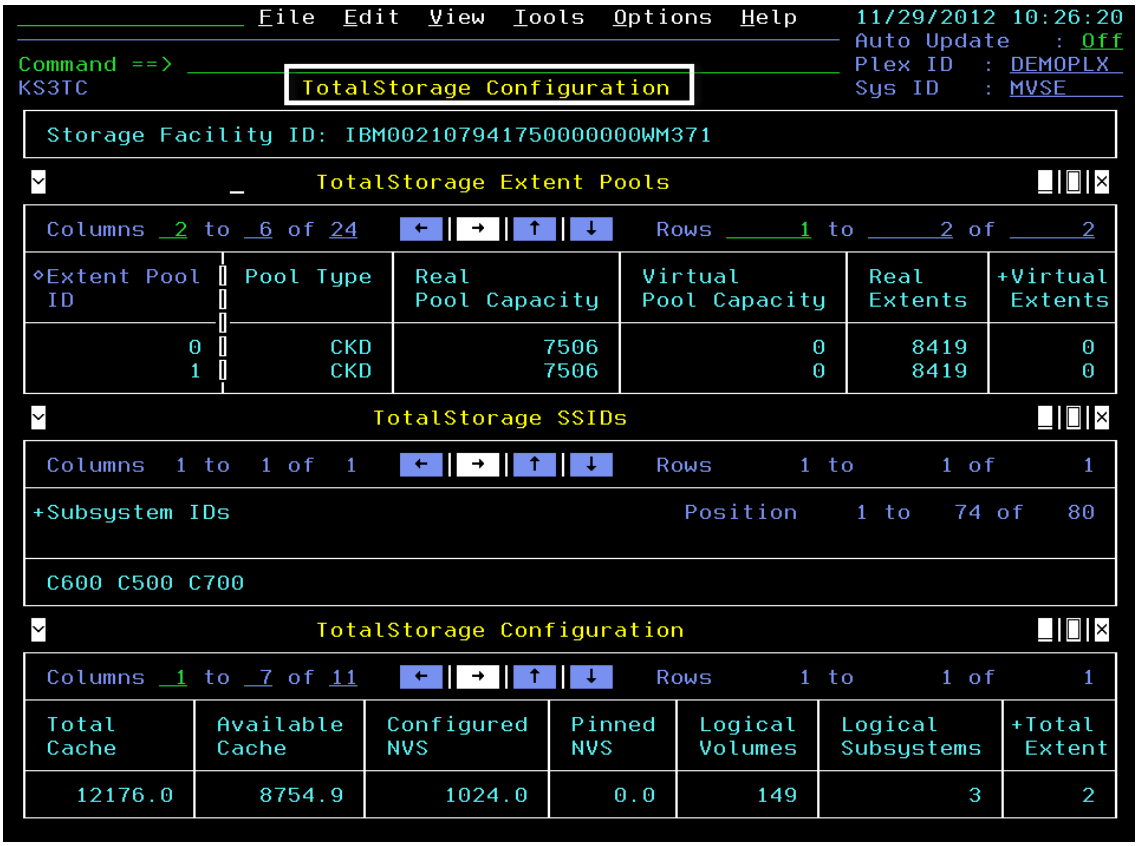

Place a slash ( / ) next to the **Subsystem ID** of a control unit and press **ENTER.**

As the selected subsystem is an IBM storage device, Option 2 will provide TotalStorage Configuration detail for this device. Other vendor specific hardware is also supported. The menu text presented for Option 2 is dependant on the type of device selected on the prior screen.



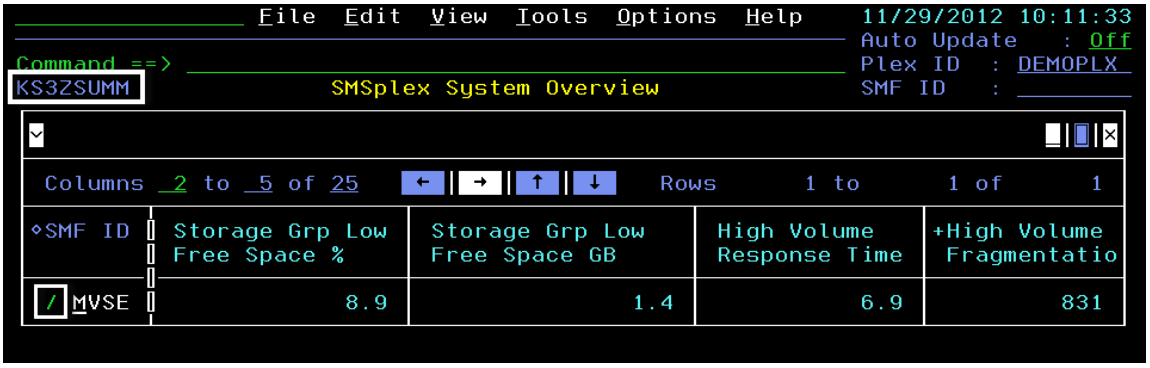

Select option – **2** - and press **ENTER.**

**TotalStorage Configuration** information is displayed.

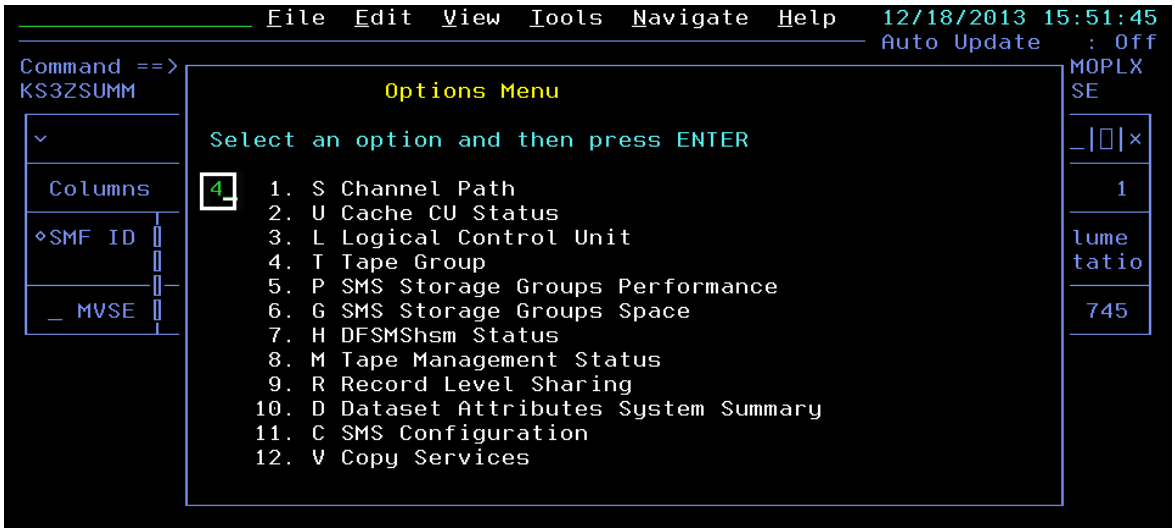



Press **PF3** two times to return to the **SMSPlex System Overview** (KS3ZSUM).

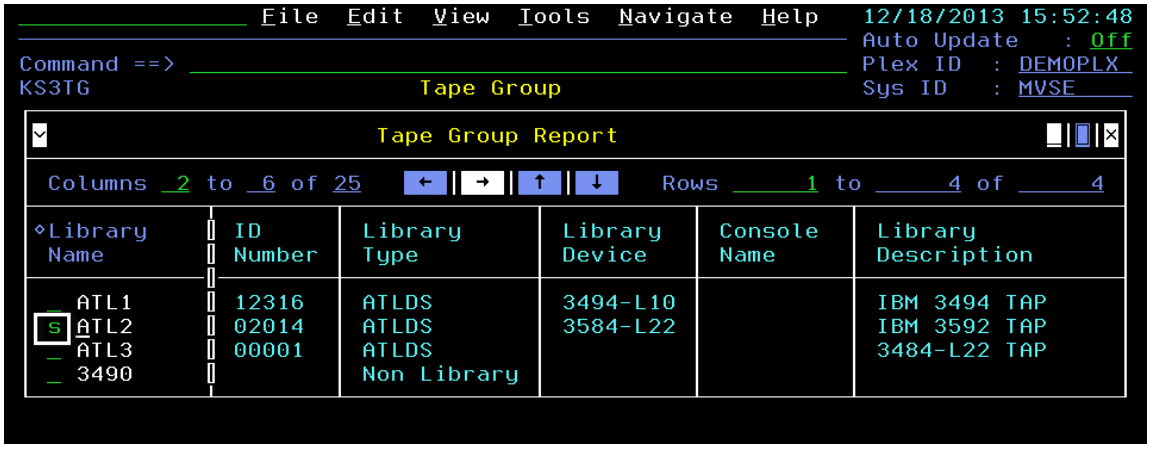
__5. Display Tape information




Place a slash ( / ) next to the **SMF ID** and press **ENTER**.

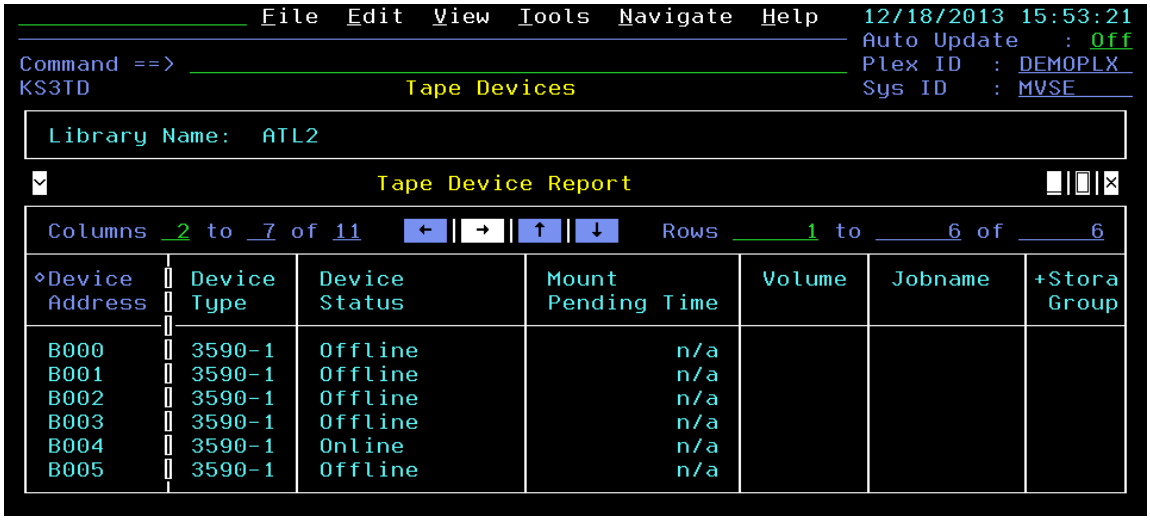



Select option – **4** - and press **ENTER**.




Tape groups are displayed. Place an – **S** - next to the ATL2 tape group and press **ENTER**.

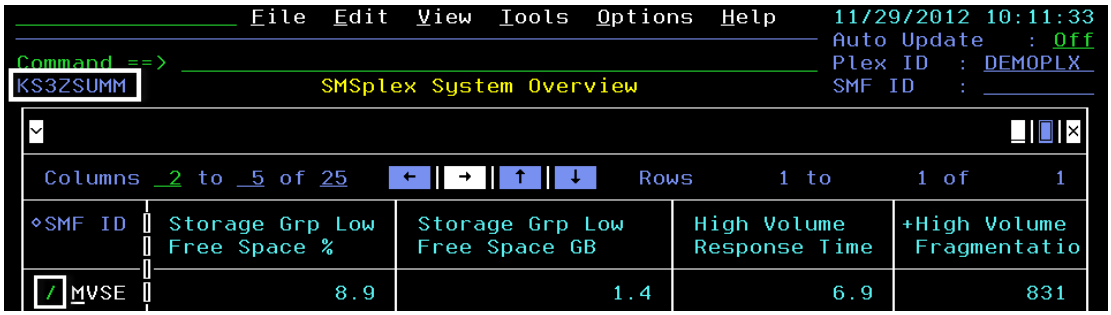
The tape devices and their status for the selected tape library are displayed. There is additional status data available to the right.




Press **PF3** two times to return to the SMSPlex System Overview (KS3ZSUM).

## 2.2 View Hardware/Device History (New in V5.3)

OMEGAMON Storage provides history data at several levels. Earlier you looked at device information in a real time manner. Now you will see how to get interval history of hardware device performance.



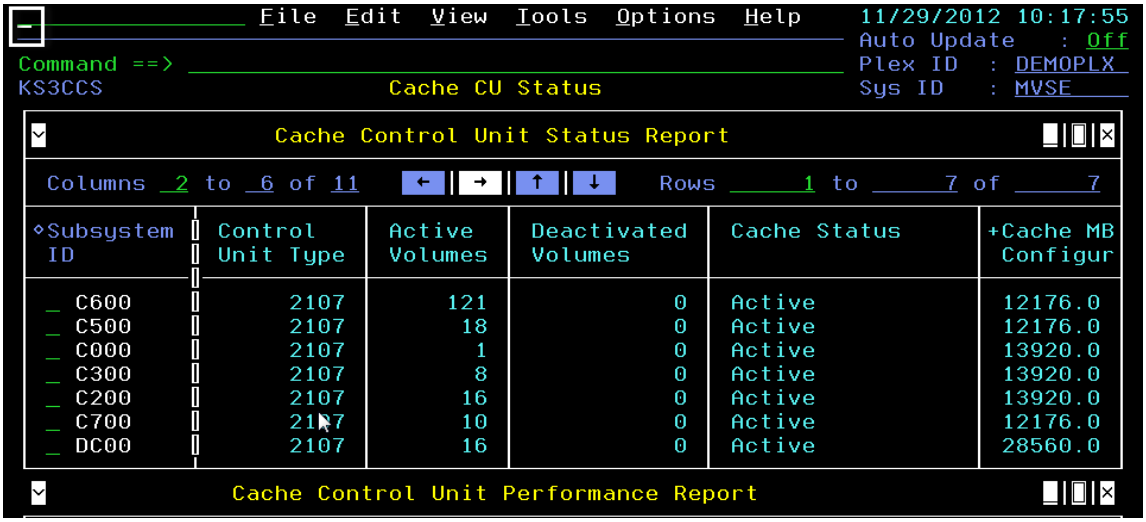

__1. Review Cache Control Unit Status

Place a slash ( / ) next to the **SMF ID** name and press **ENTER.**

The menu options available again are displayed.

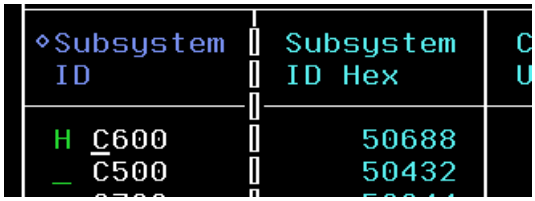
This menu provides options to review the state and status of the various hardware and software that make up the storage subsystem. Several of these options will be explored in this lab, beginning with the status of the **Cache Control units**.


Select option – **2** - and press **ENTER.**

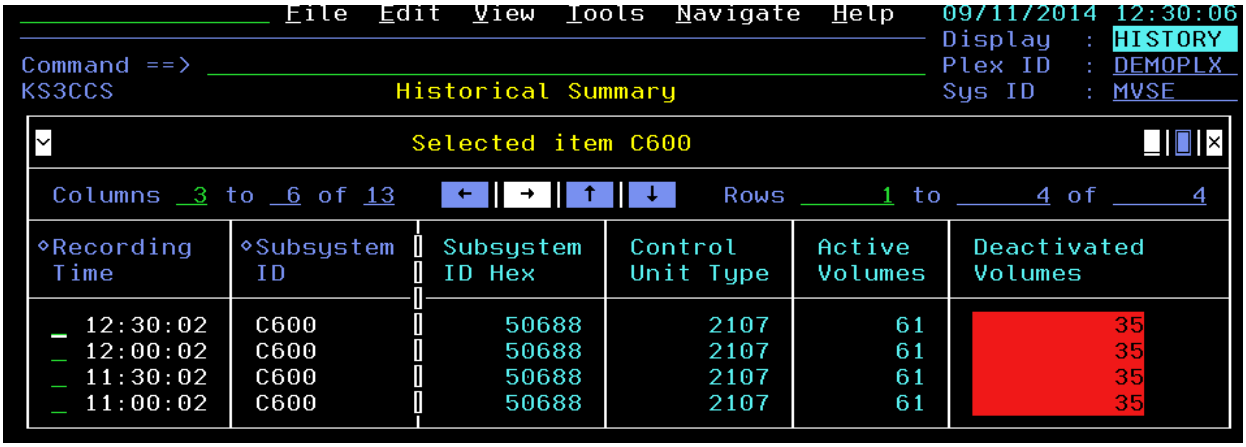



You are again viewing the cache control unit status panel (KS3CCS).

__2. Request history




Position the cursor by a device, enter H and Press Enter




You are now looking at history of the cache control unit.

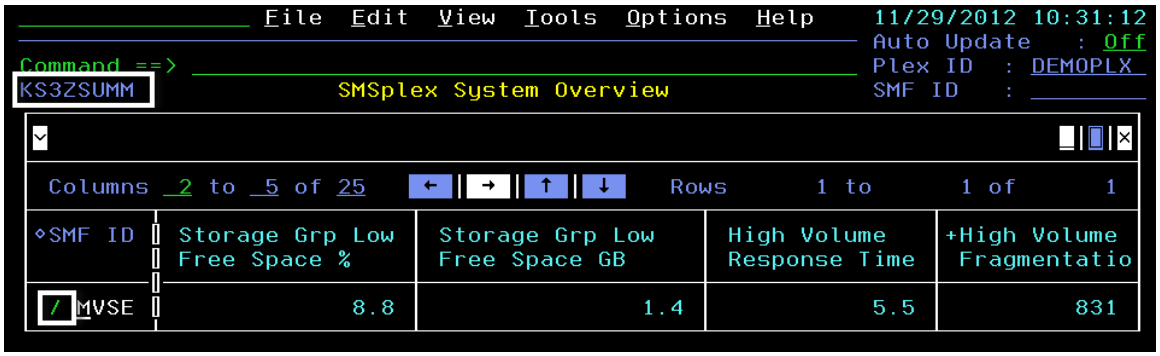
__3. Return to the KS3ZSUM panel

Press F3 multiple times to return to KS3ZSUM.

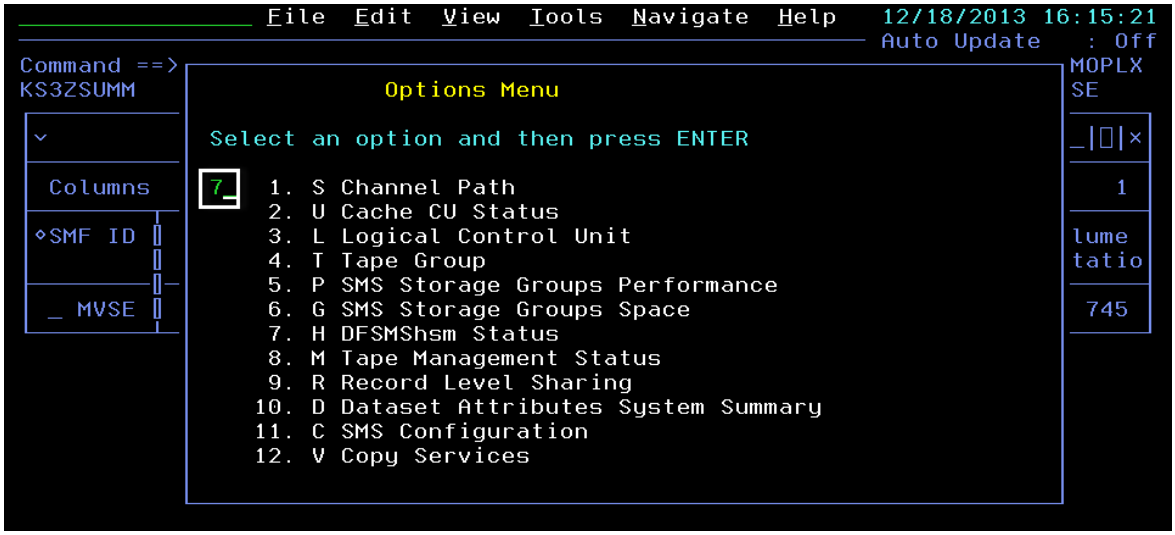
## 2.3 View Storage Subsystem data

__1. Display DFSMShsm information

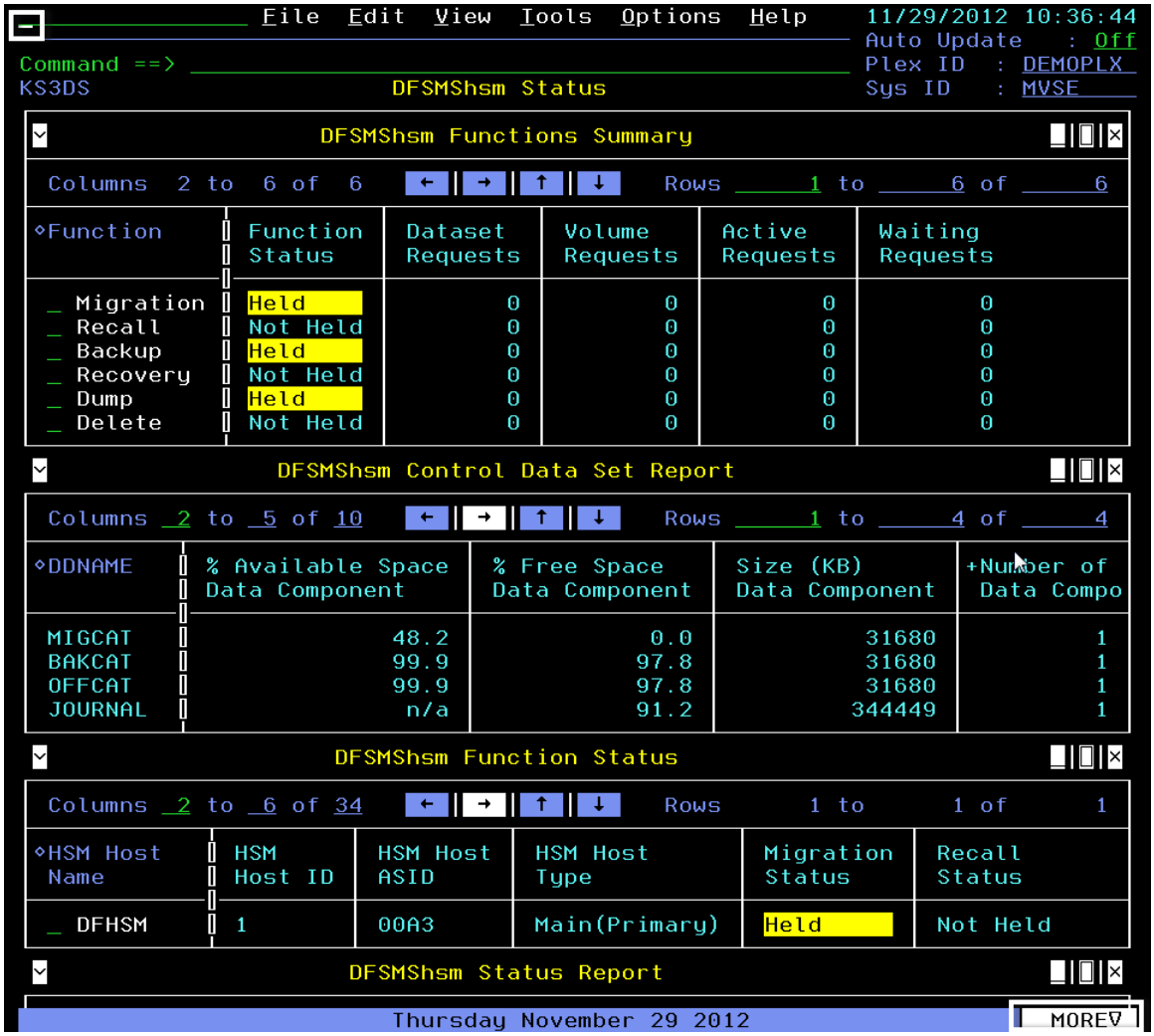
OMEGAMON XE for Storage also displays information related to the various storage subsystems. This information is accessed from the SMSPlex System Overview(KS3ZSUM).




Place a slash ( / ) next to the **SMF ID** and press **ENTER**.

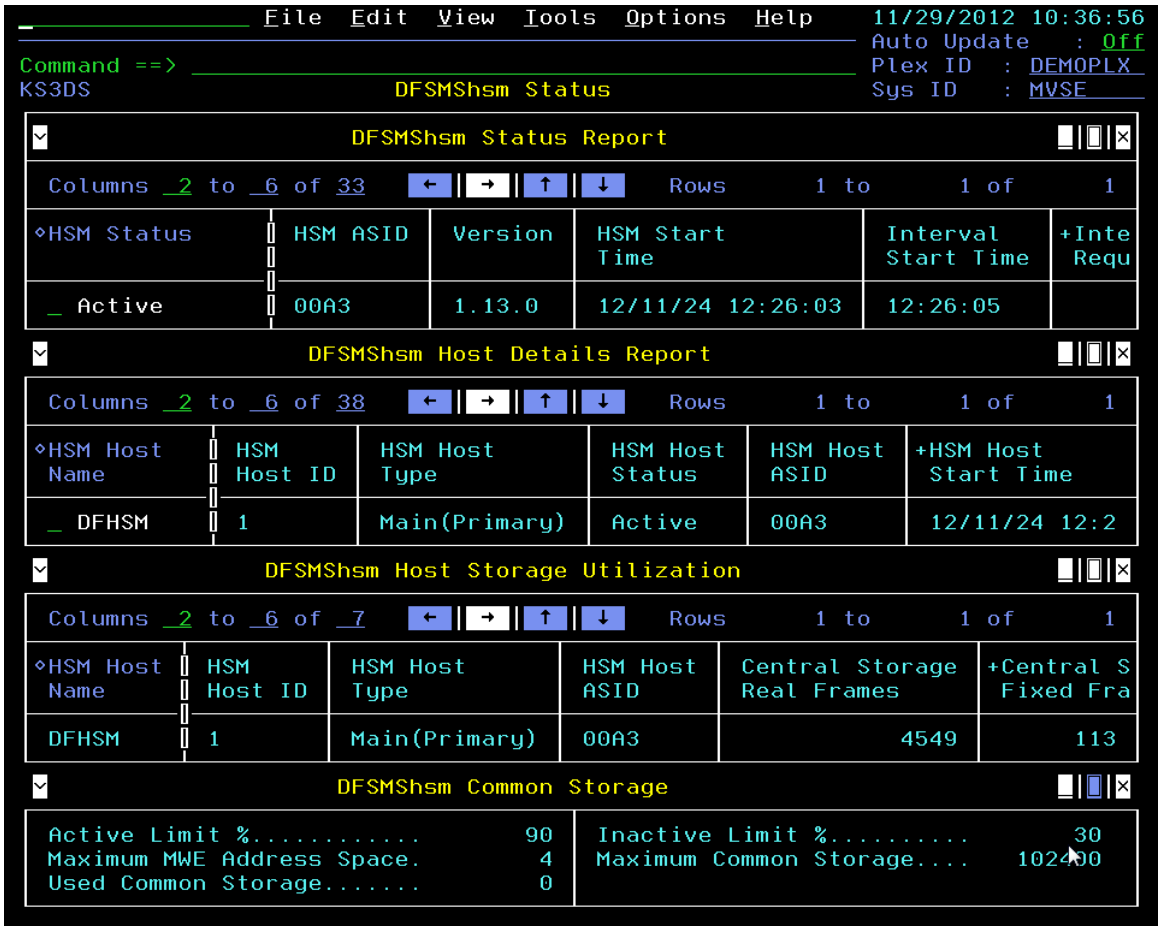



Select option – **7** - and press **ENTER**.



**DFSMShsm** data is displayed. More data is available. With the cursor in the home position (top left), press **PF8** to scroll down.

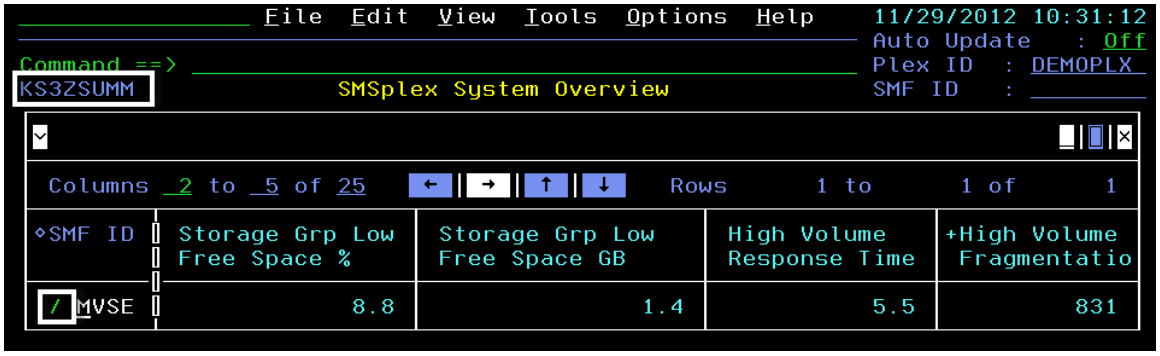
The remaining DFSMShsm data is displayed.



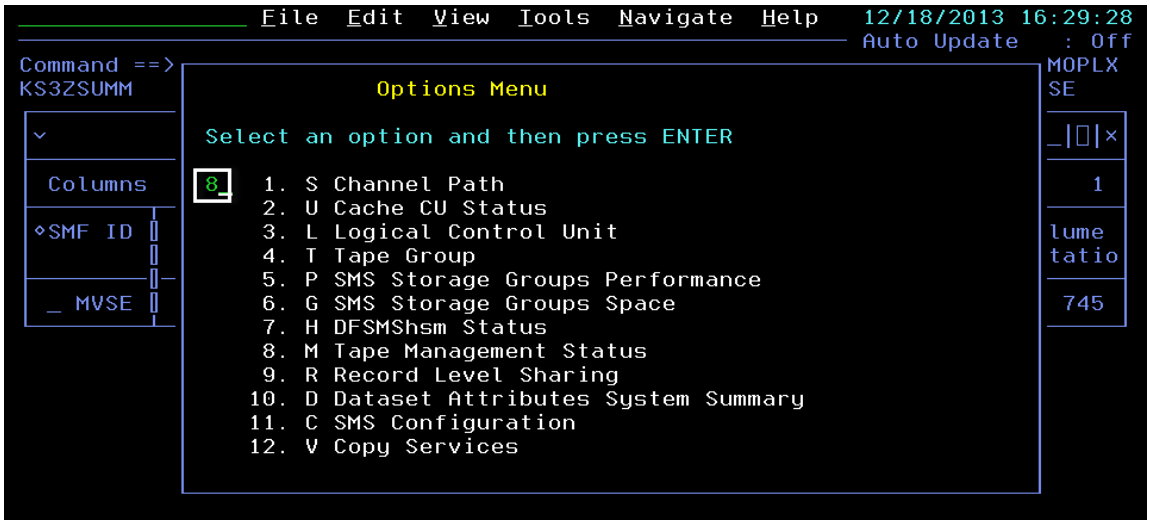

Press **PF3** to return to the **SMSPlex System Overview** (KS3ZSUM).

__2. Display Tape Management information – DFSMSrmm (or CA-1, if installed)

OMEGAMON XE for Storage also displays information related to the tape management systems of DFSMSrmm or CA-1. This information is accessed from the **SMSPlex System Overview**(KS3ZSUM).

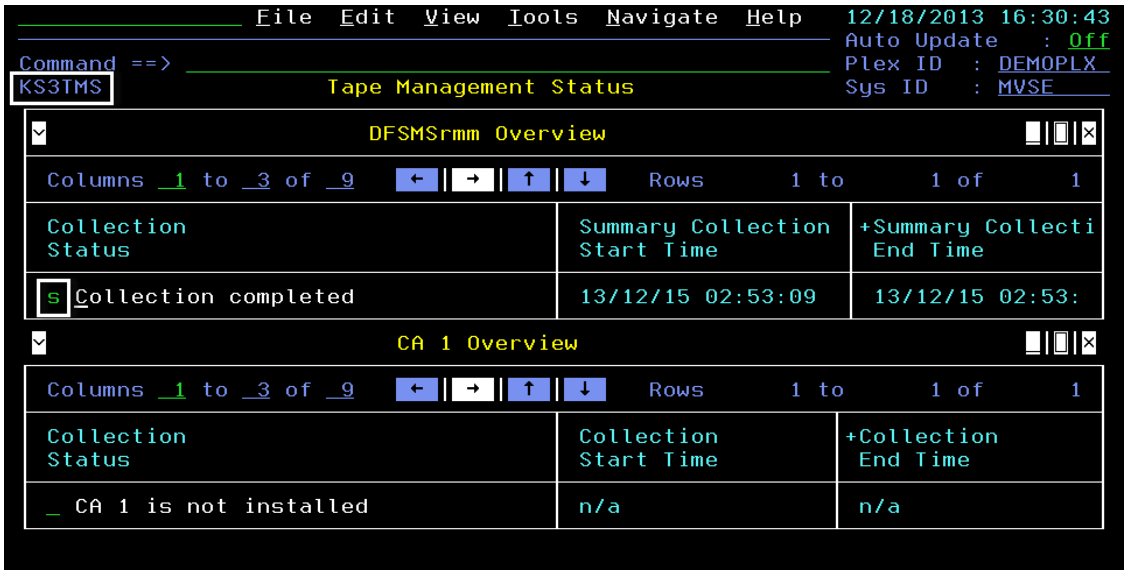



Place a slash ( / ) next to the **SMF ID** and press **ENTER**.

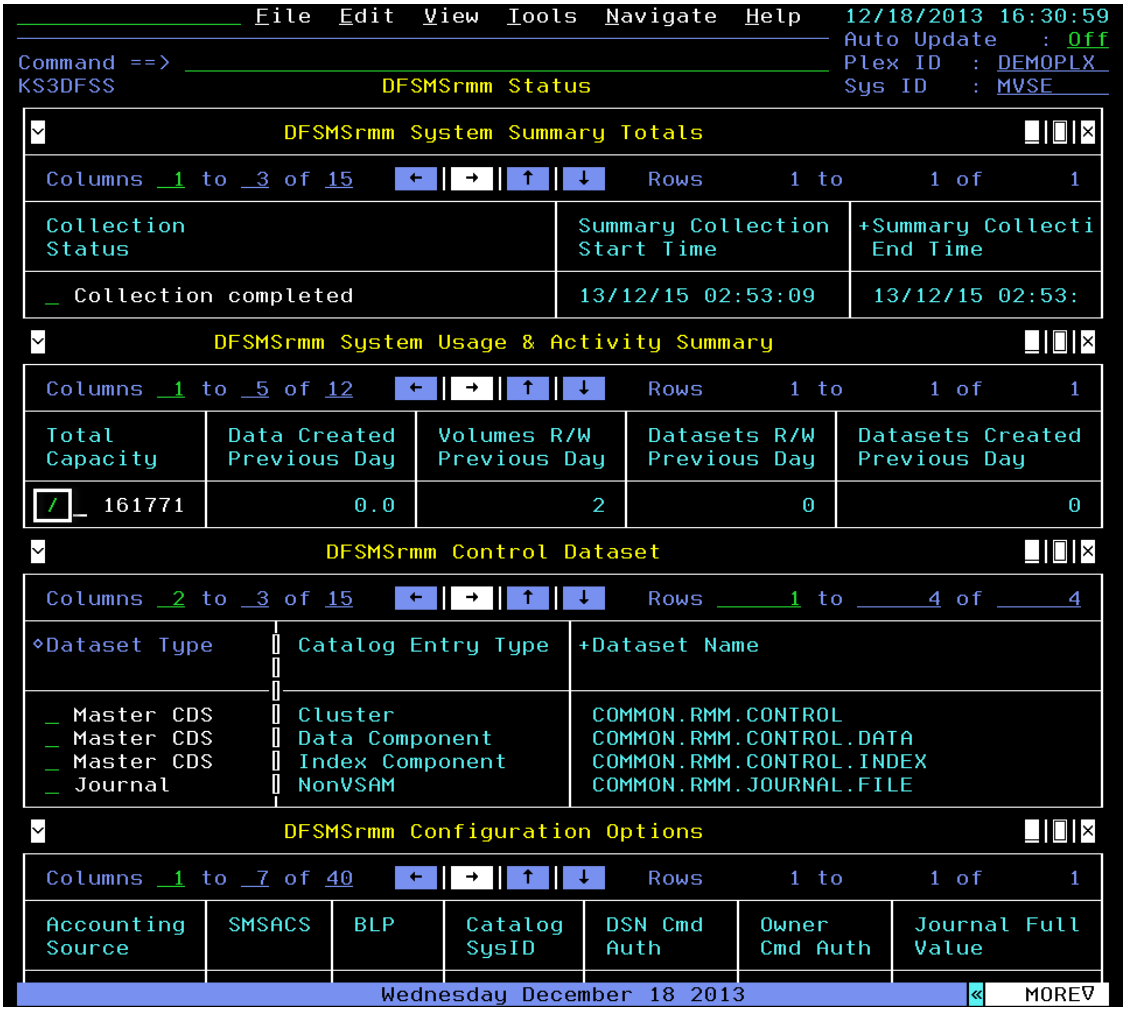



Select option – **8** - and press **ENTER**.

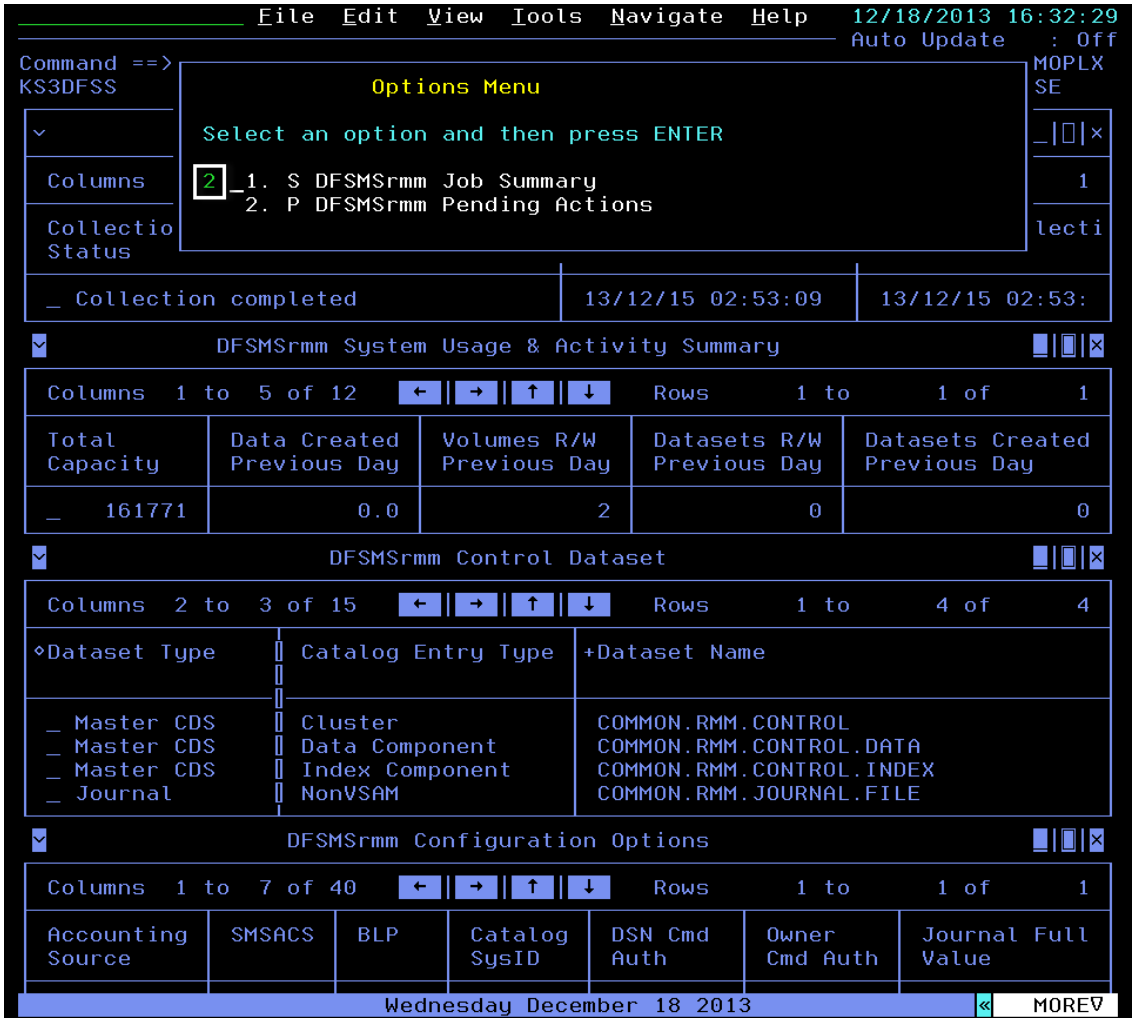
Tape Management Status (KS3TMS) is displayed.



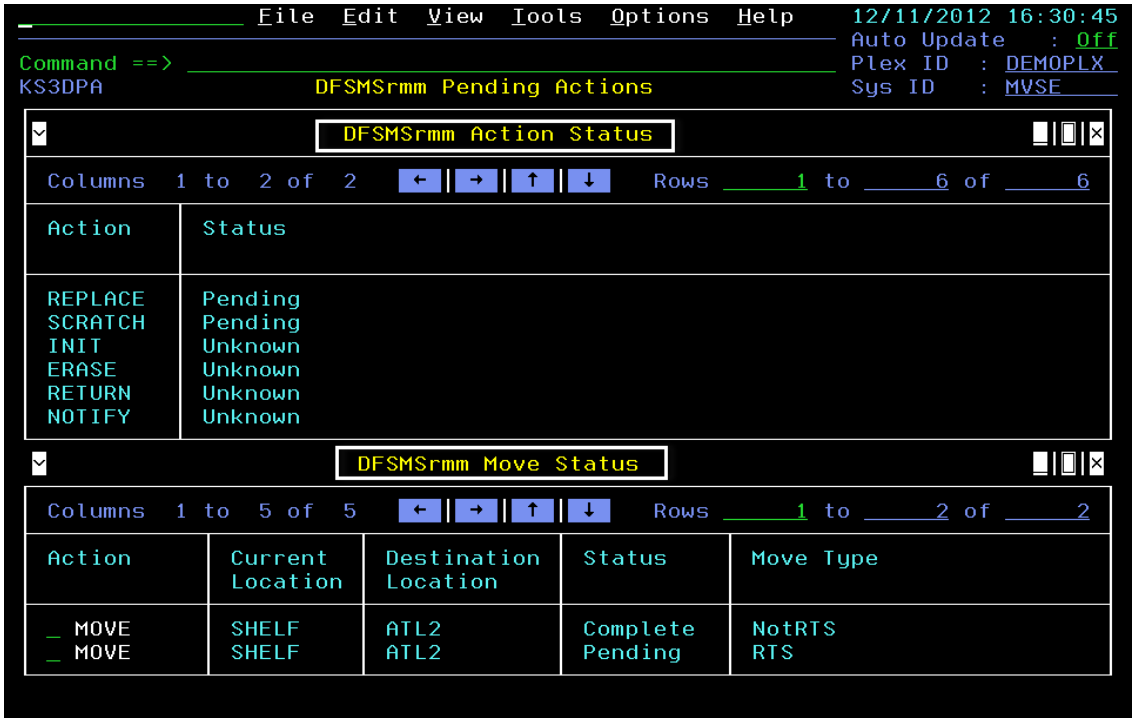

Note that support for both DFSMSrmm and CA-1 is provided. Place an –**S**- next to the Collection Status for DFSMSrmm and press **ENTER**.




The DFSMSrmm Status is displayed. Place a slash ( / ) next to the row in the **System Usage & Activity Summary** and press **ENTER**.




Select Option – **2** - and press **ENTER**.

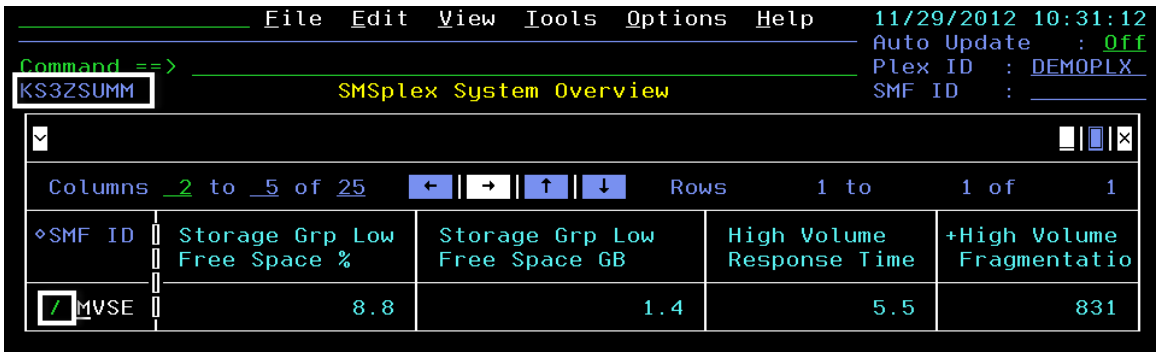



The DFSMSrmm Actions and Status is displayed.

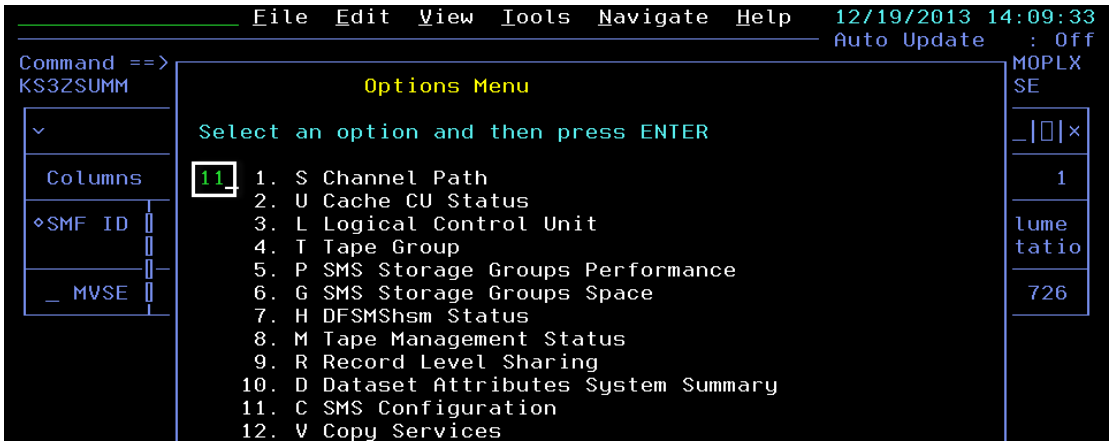
Press **PF3** two times to return to the SMSPlex System Overview (KS3ZSUM).

__3. Display DFSMS configuration information

OMEGAMON XE for Storage also displays information related to SMS system configuration and constructs. This information is accessed from the SMSPlex System Overview(KS3ZSUM).

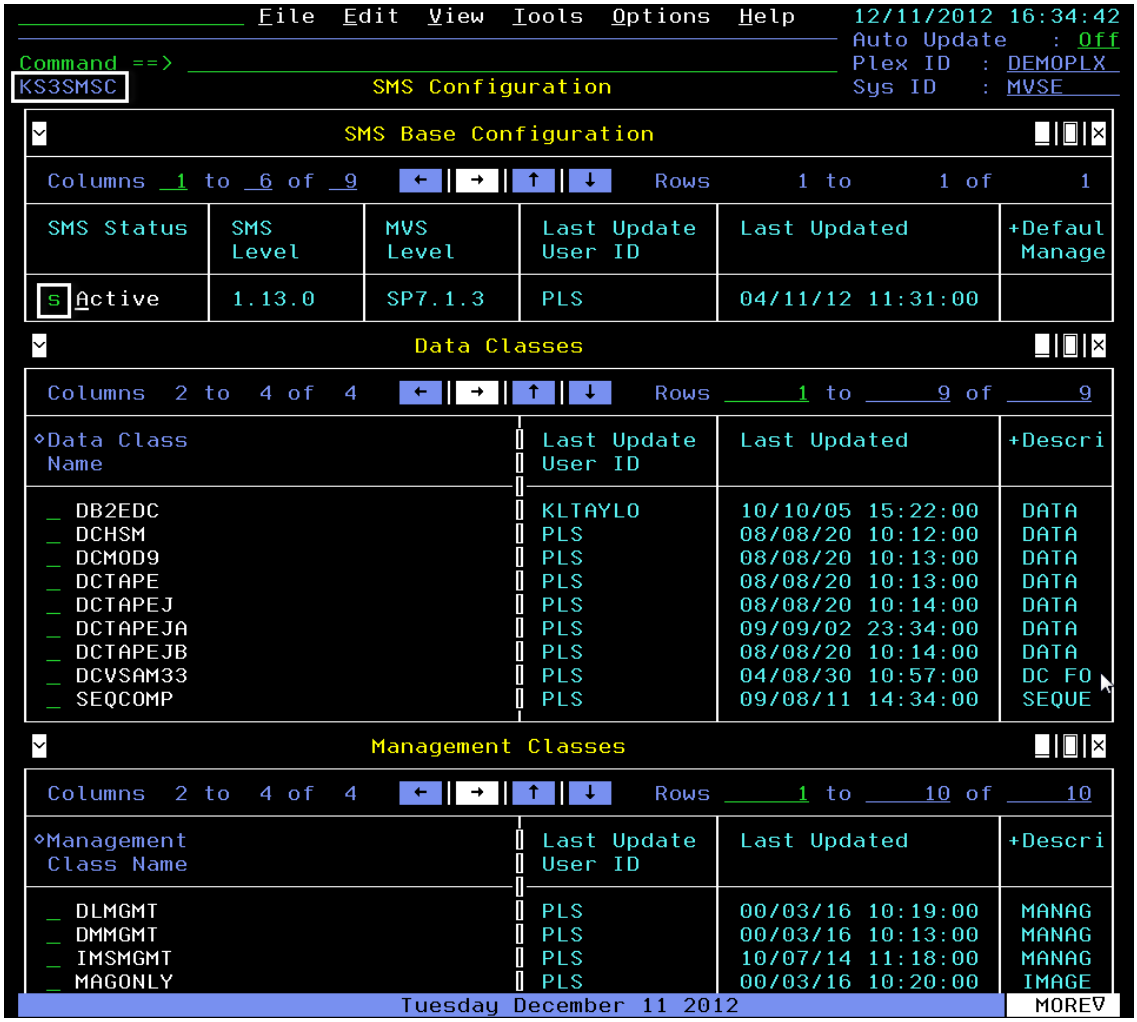



Place a slash ( / ) next to the SMF ID and press **ENTER**.



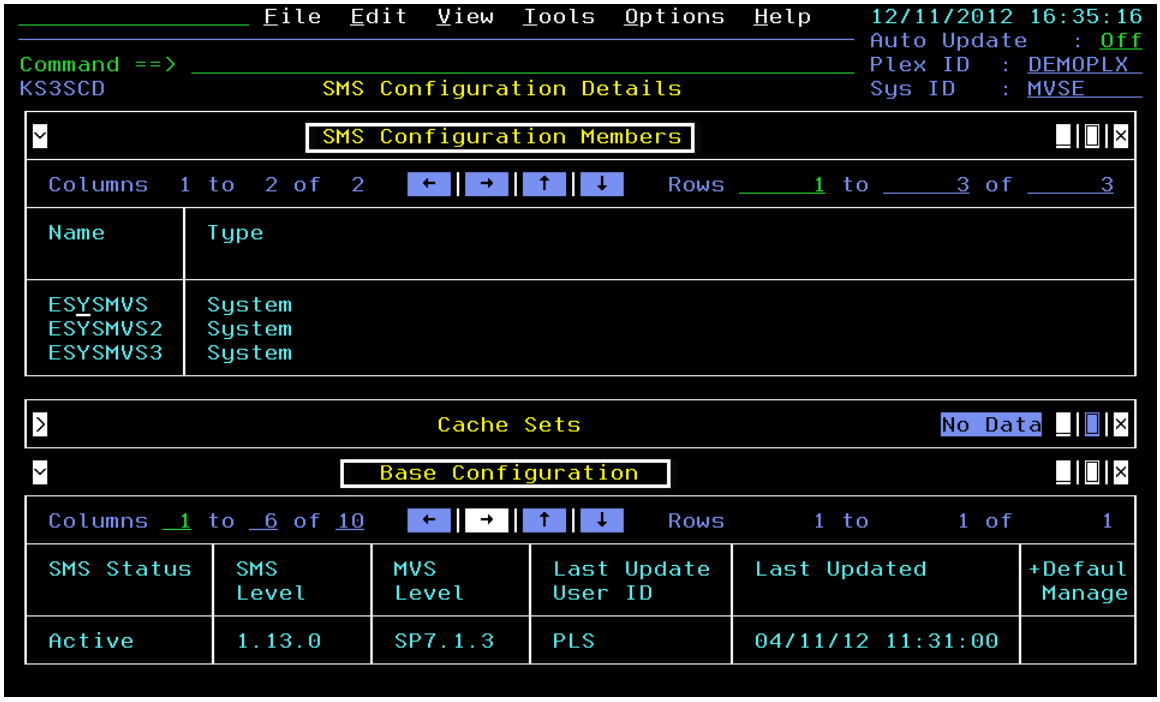

Select option – **11** - and press **ENTER**.

The **SMS Configuration** (KS3SMSC) screen provides information about SMS configuration and SMS constructs.



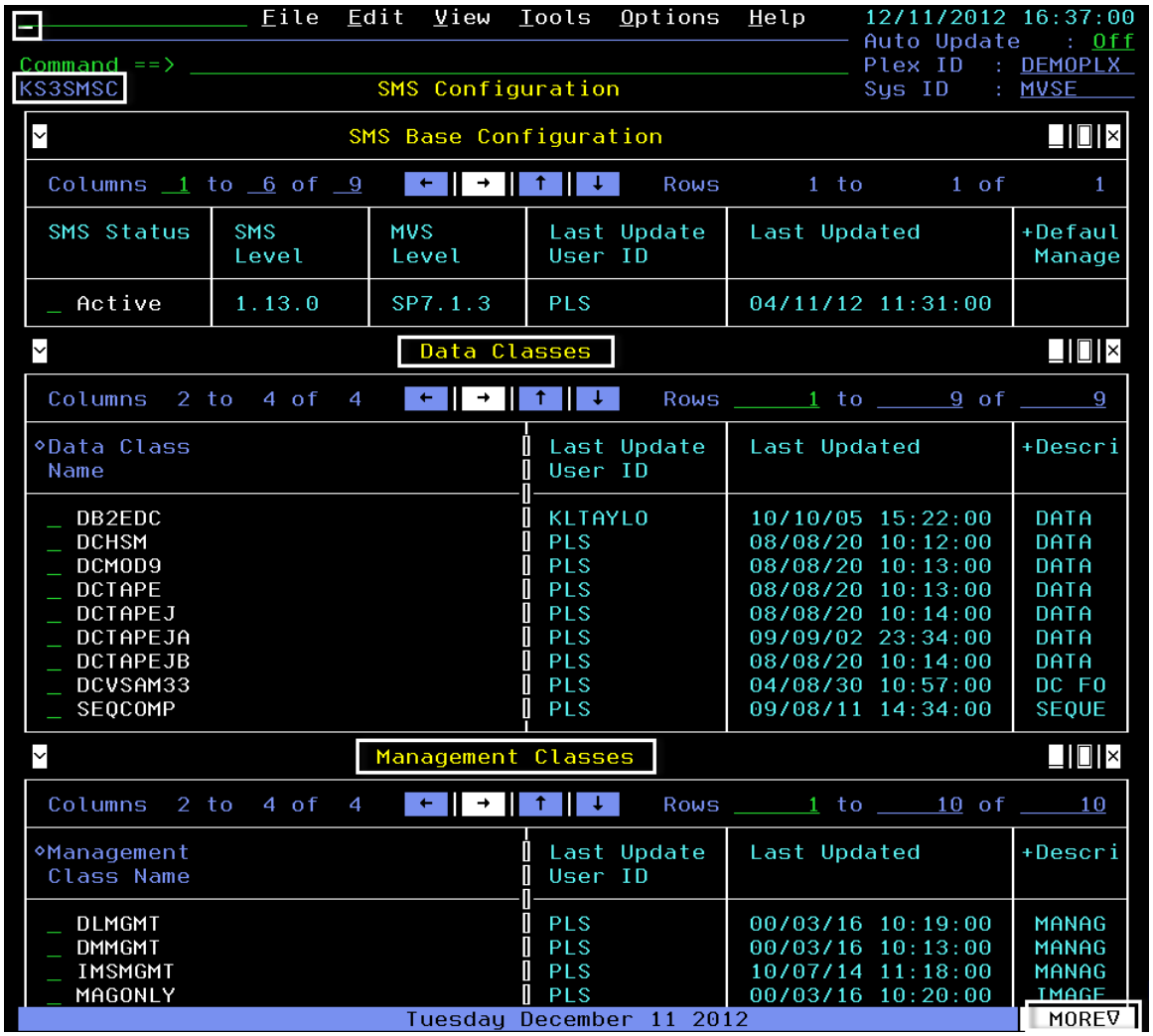

Place an – **S** - on the SMS Base Configuration and press **ENTER**.

Information related to the LPARs configured within the current SMSplex is displayed.



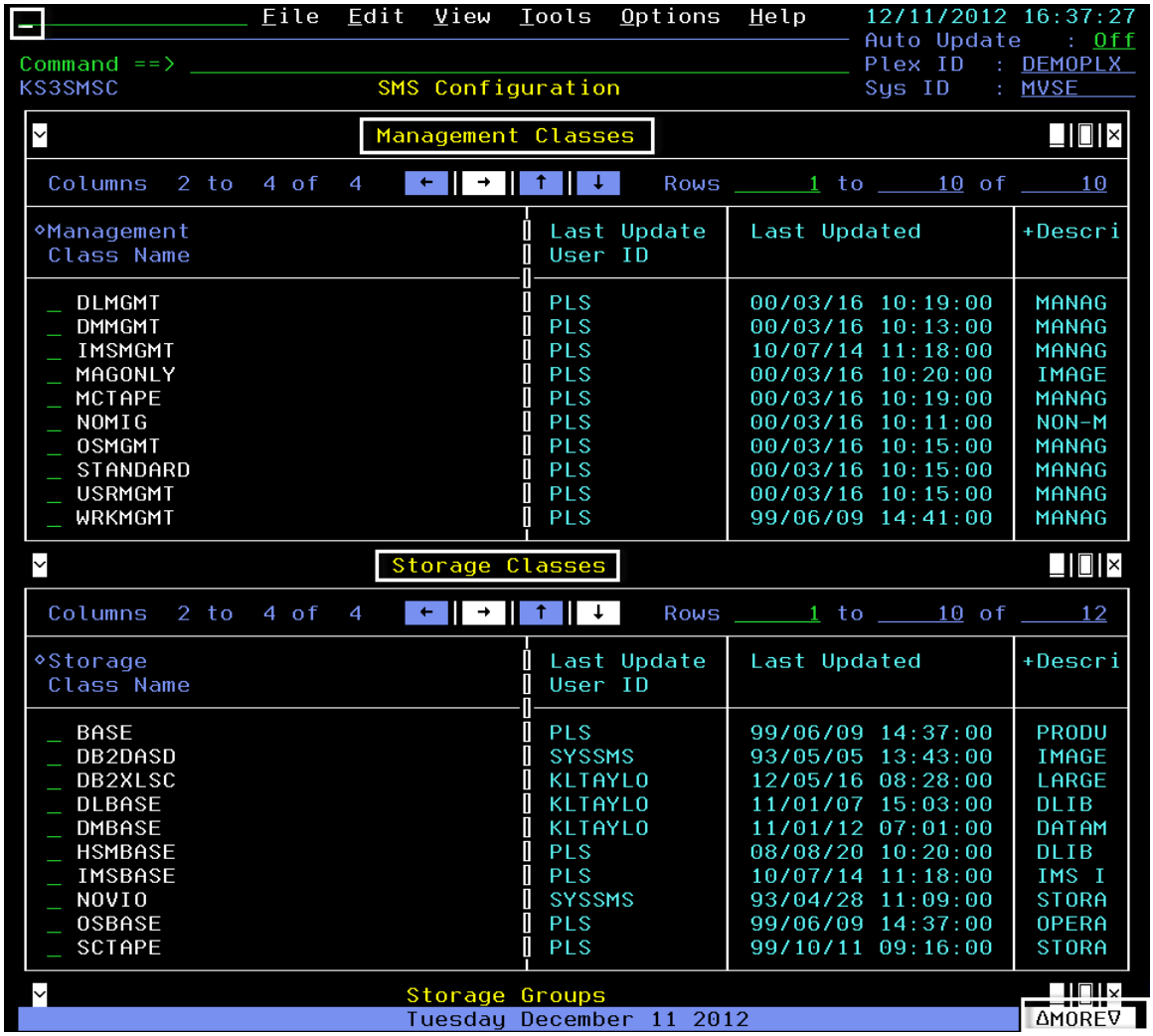

Press **PF3** to return to SMS Configuration (KS3SMSC).

In addition to SMS Configuration, OMEGAMON XE for Storage also provides SMS construct information. More SMS construct data is available on subsequent screens by scrolling down.



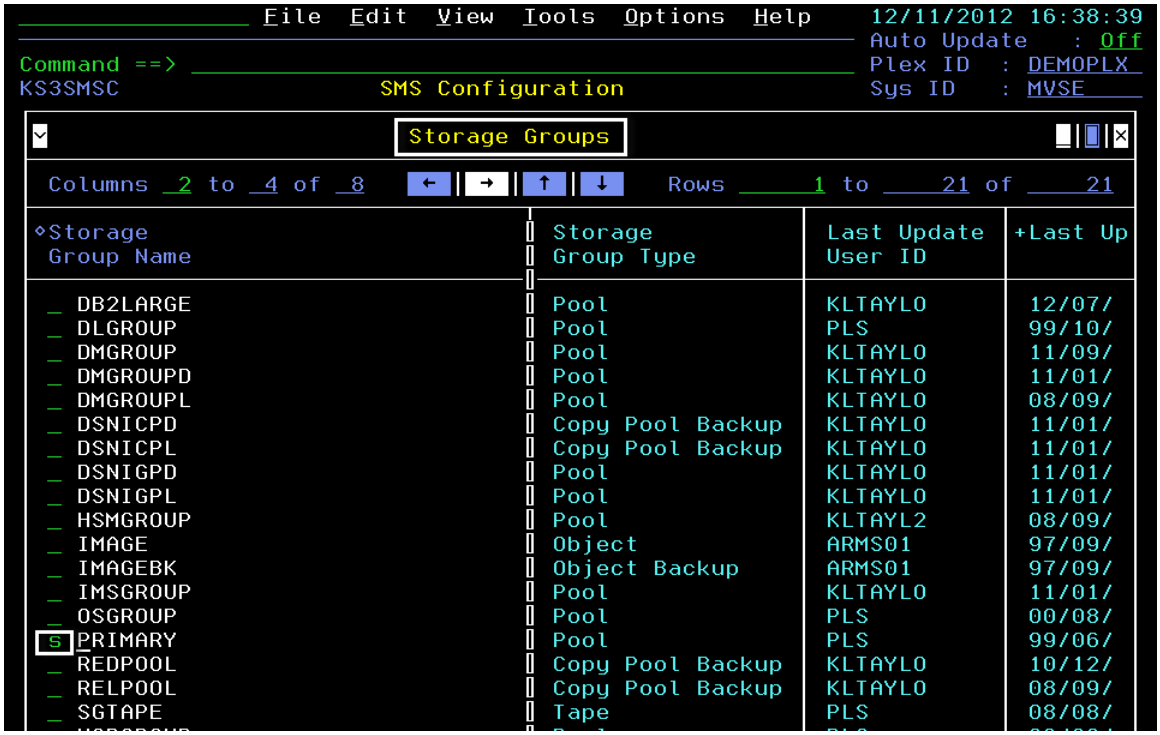

With the cursor in the home position (top left), press **PF8** to scroll down.

Additional SMS Constructs are shown. More construct Information is available.

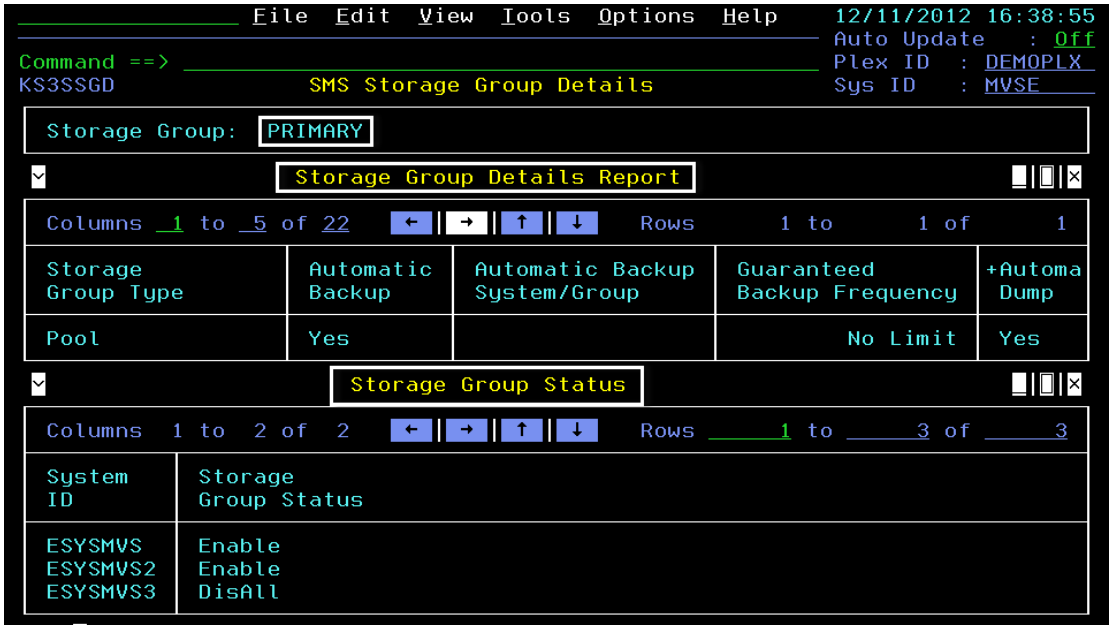



With the cursor on the home position (top left), press **PF8** to scroll down.

The remaining SMS construct information is shown.




Place an – **S** - next to one of the listed **Storage Groups** and press **ENTER**. Details for this or for any of the previously SMS constructs are displayed.




Press **PF3** three times to return to Enterprise Summary screen, KOBSTART.

This concludes Lab 2, View Device and Storage Subsystem Data

# Lab 3 View Dataset Attribute Details and Exceptions

The final lab, Lab 3, explores the various dataset exception reports that are available in the e3270 interface. These dataset details are typically collected once daily, during a period of low system activity.

Lab 3 will review several of the exception reports available in OMEGAMON XE for Storage that can be used for identifying inefficient space utilization. The main purpose of this exercise is to demonstrate the breadth and depth of the dataset exception reporting.

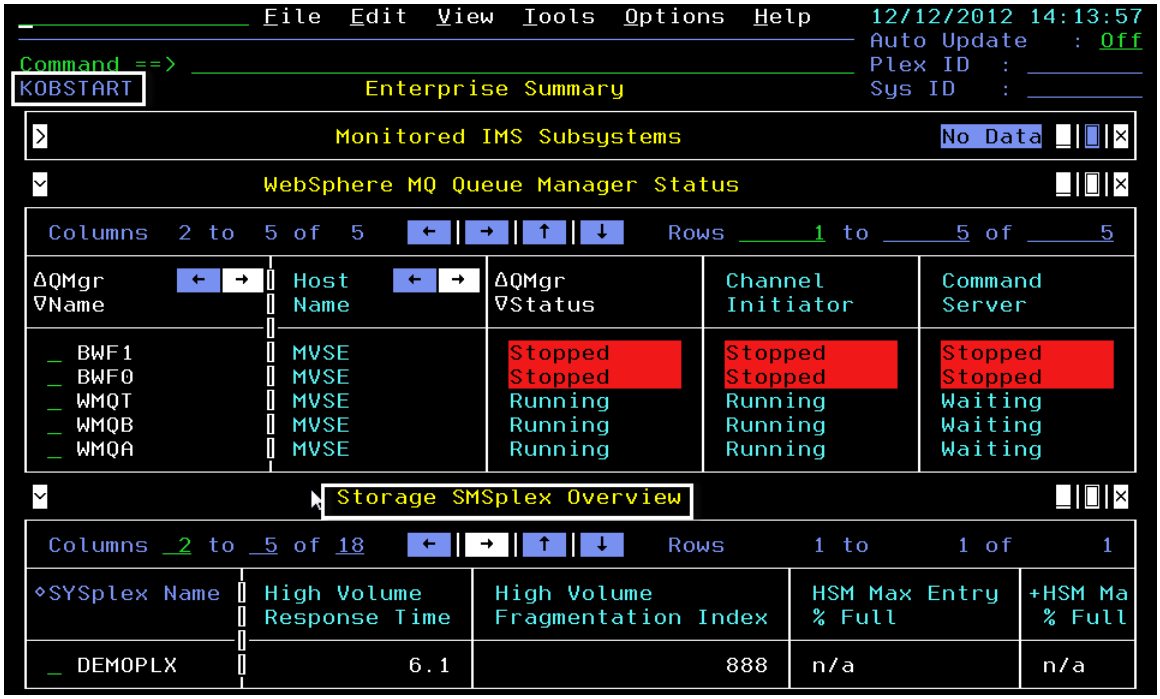
**Security Information!**

Prior to starting these exercises, if you have not already done so, please see the instructor for user ID/password and logon instructions.

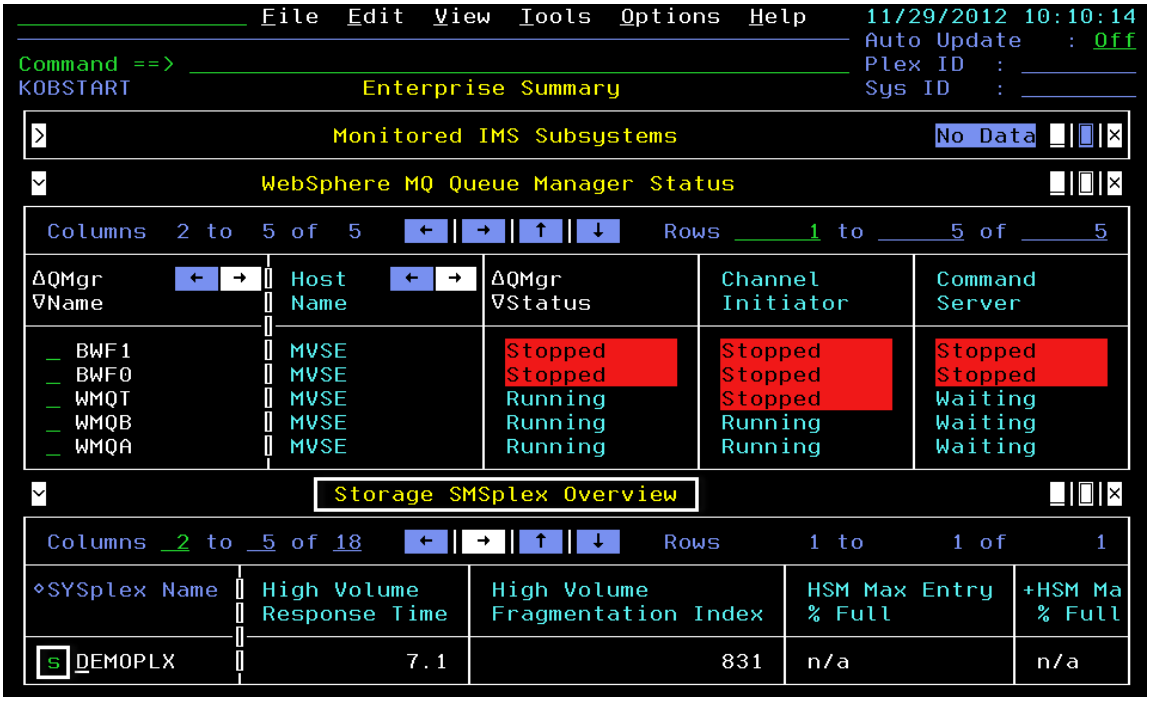
## 3.1 View and Navigate Dataset Attribute System Summary

In this Lab, the participants will view dataset exception reporting provided by the OMEGAMON XE for Storage e3270 interface.

__1. Locate OMEGAMON XE for Storage on the Enterprise Summary (KOBSTART). Please see step 2 from Lab 1 for instructions for locating this section of the display.

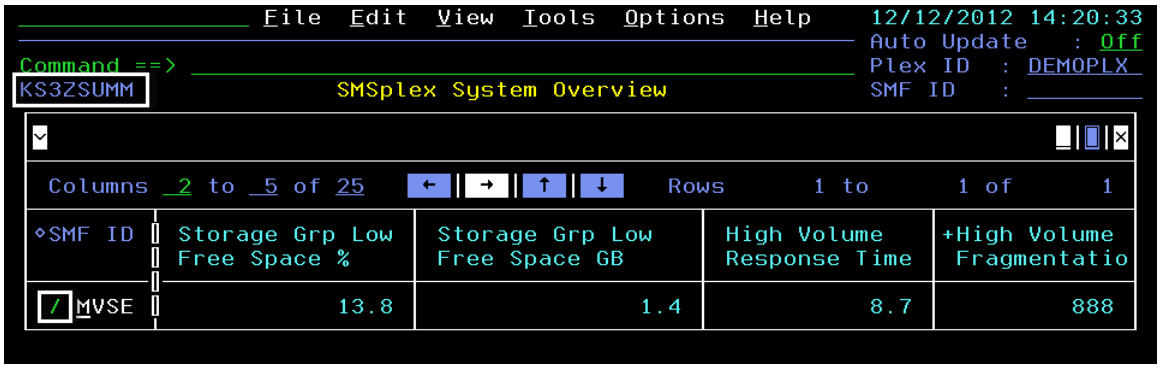


__2. Zoom into the OMEGAMON for Storage product home screen and display available options



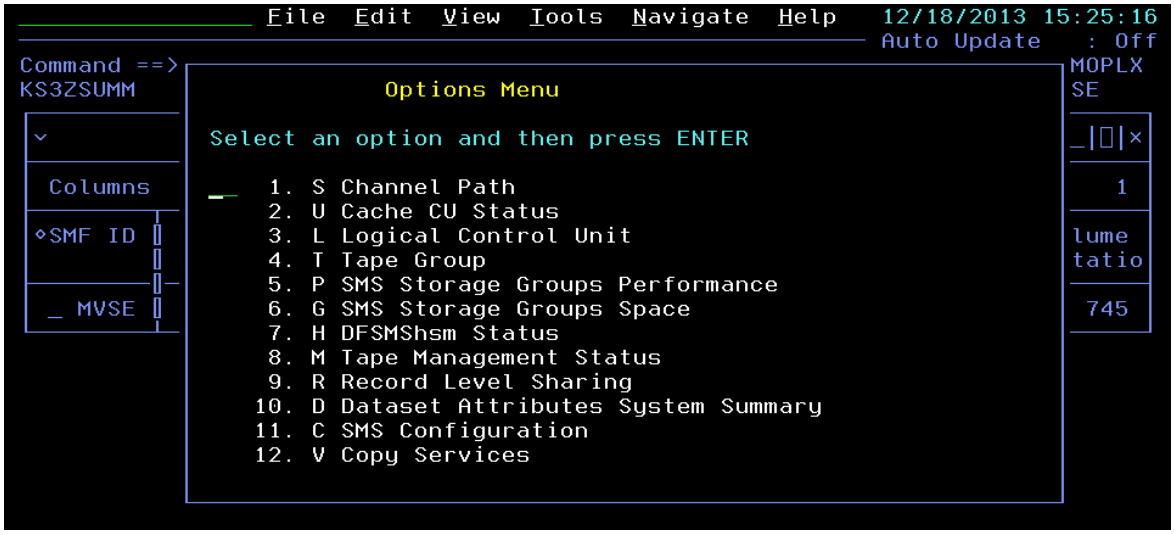

Place an – **S** - next to the Sysplex name and press **ENTER.**

The SMSplex System Overview(KS3ZSUMM) is displayed.



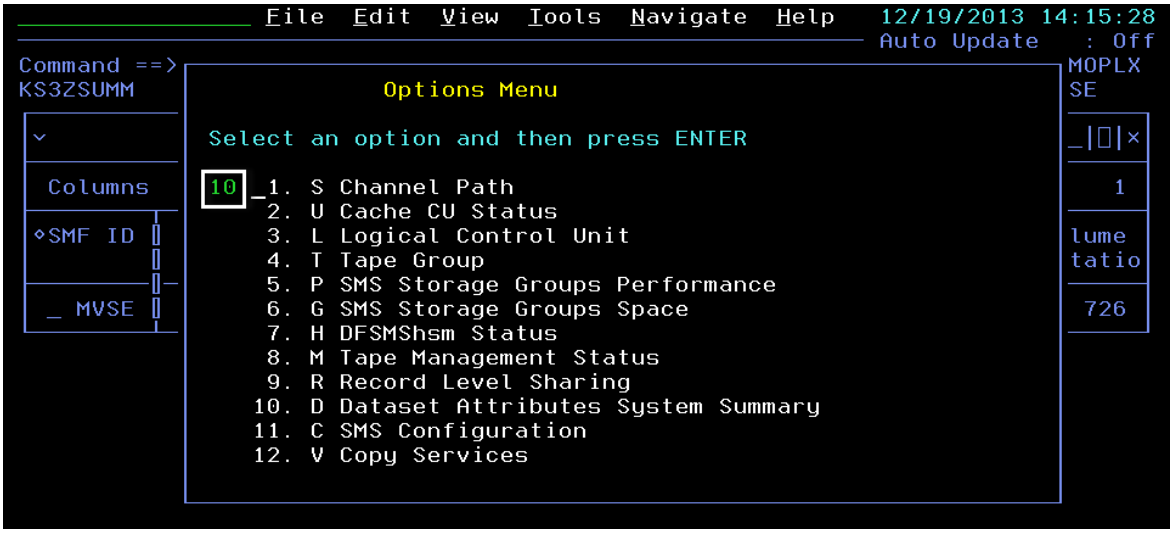

Place a slash ( / ) next to the **SMF ID** name and press **ENTER.**

The menu of available options is displayed.



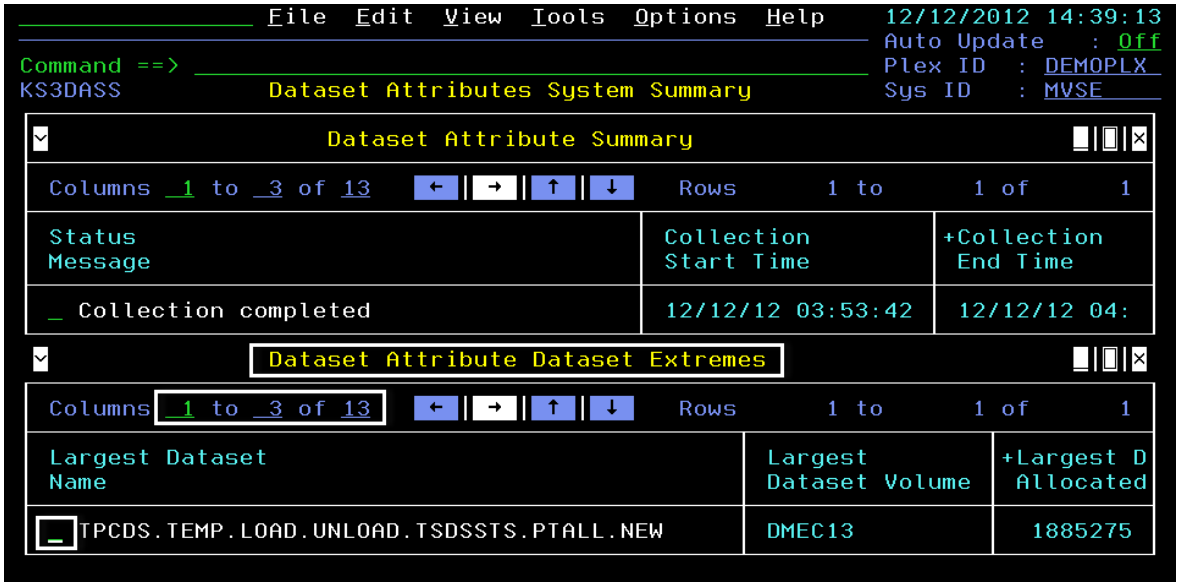

__3. Review Dataset Attributes Summary

This is the primary menu for OMEGAMON XE for Storage. Several of these options have been reviewed in the prior labs. This lab will explore the Dataset Attribute reports.



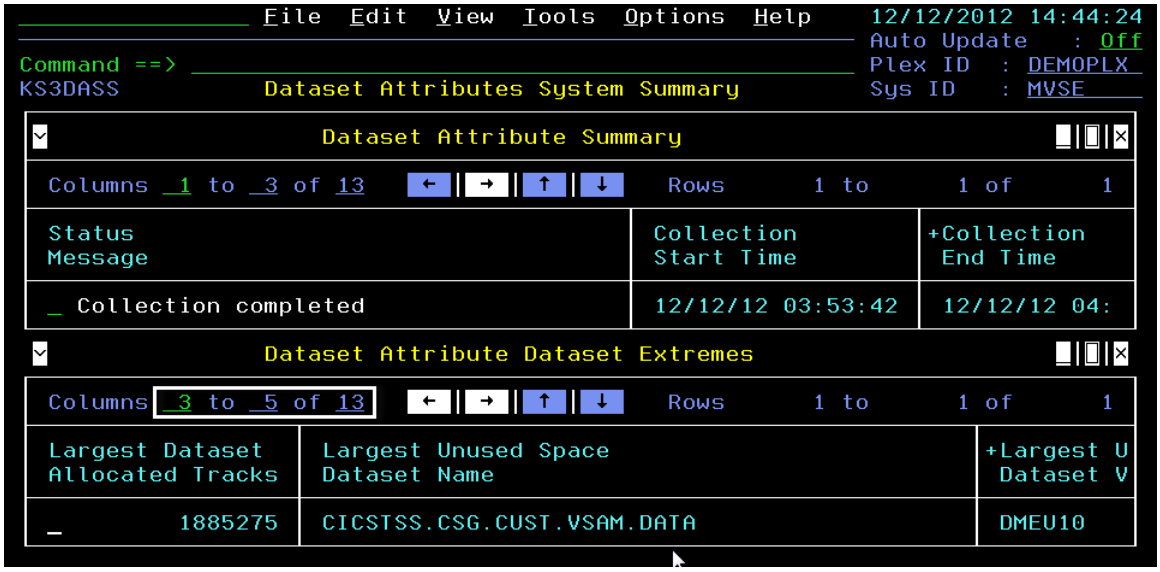

Select option – **10** - and press **ENTER**.

The Dataset Attributes System Summary is shown. This initial screen displays extreme dataset characteristics, like largest and oldest datasets. More data is available to the right.



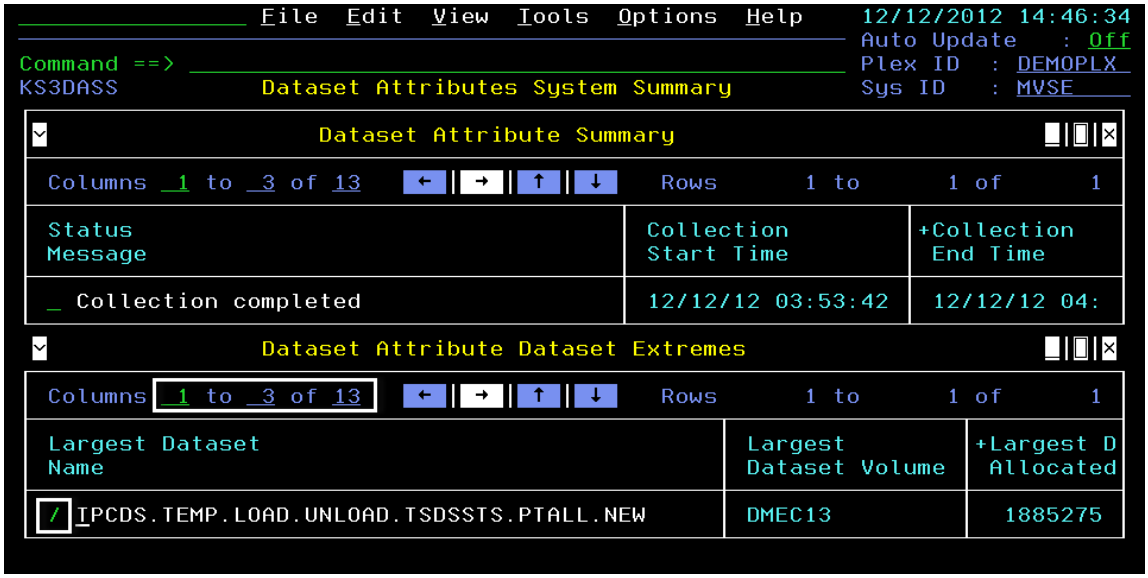

With the cursor somewhere in this Dataset Extremes window, press **PF11** to scroll this window to the right.

More data is available to the right. While this lab will not show these subsequent screens, feel free to explore this additional information by scrolling right.

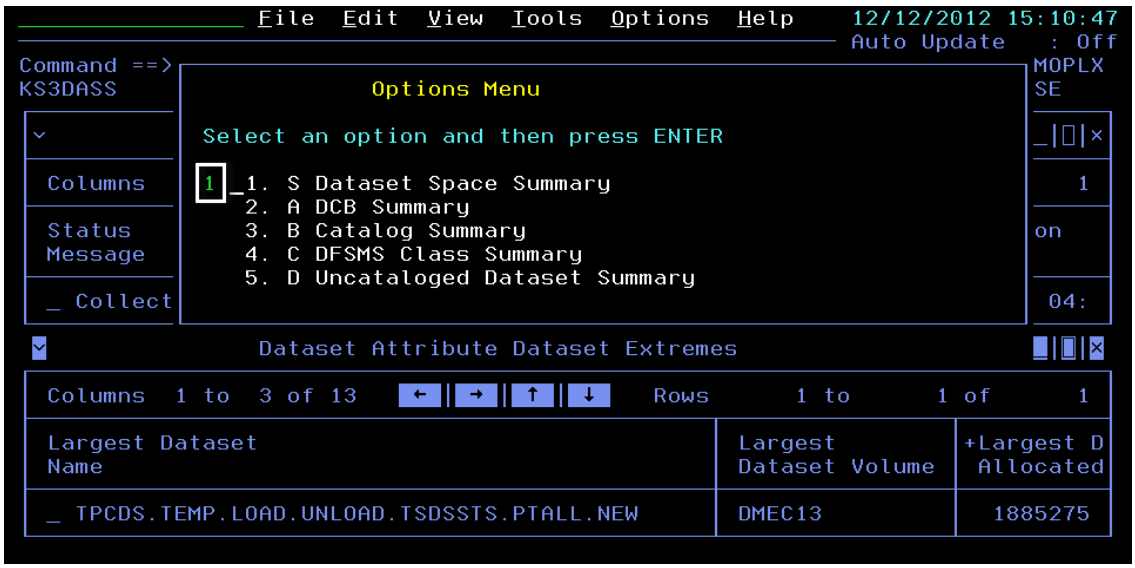



After reviewing these Dataset extremes, with the cursor still in this window, press **PF10** the appropriate number of times to scroll back to the left in order to return to Column 1 for this window.

__4. Review Dataset Space exception reports.




After scrolling left until column 1 is displayed, place a slash ( / ) next to the largest dataset name and press **ENTER**.

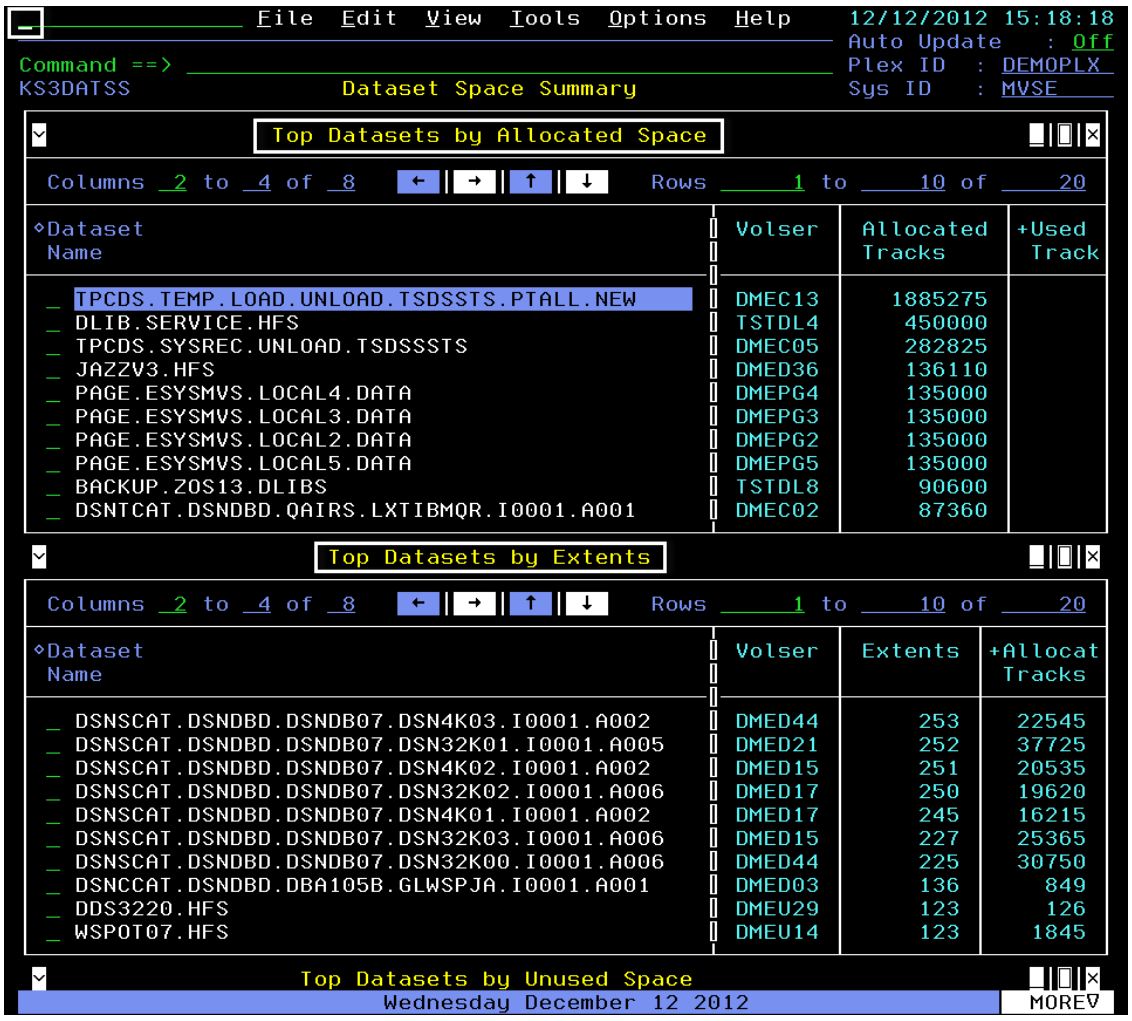



This lab will explore each of these dataset exception reports in sequence. After each report is reviewed, you will be directed to return to this screen

Select option – **1** - and press **ENTER**.

The Dataset Space Summary provides several '**top 10**' reports at the dataset level. This initial display shows the largest allocated files and the dataset with the most extents.

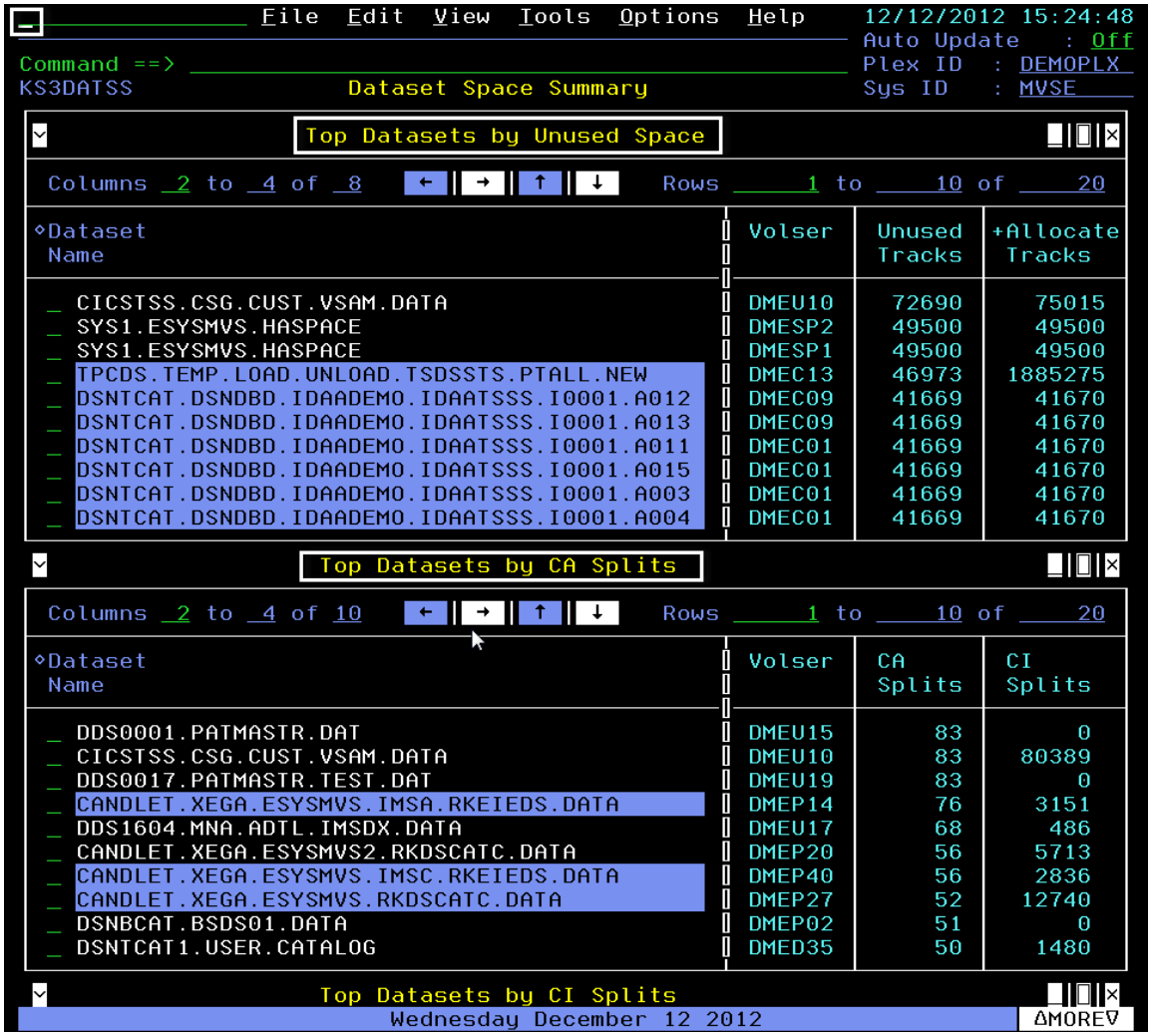
More data is available by scrolling down.




With the cursor in the home (top left) position, Press **PF8** to scroll down.

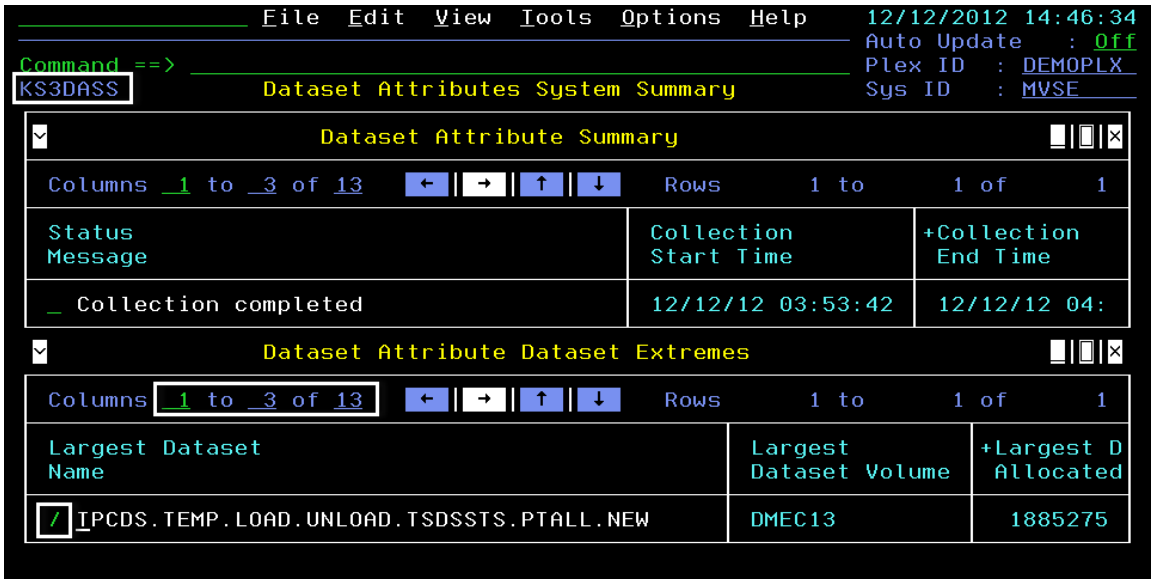
This 2nd page (if using the default screen size) of the Dataset Space Summary shows the dataset with the most unused space. Reports are also provided for VSAM files with the most **CA** and **CI** splits.

While this lab does not explore the 3rd page of this report, feel free to do so by scrolling down. Also feel free to select an individual dataset to view additional datasets details.

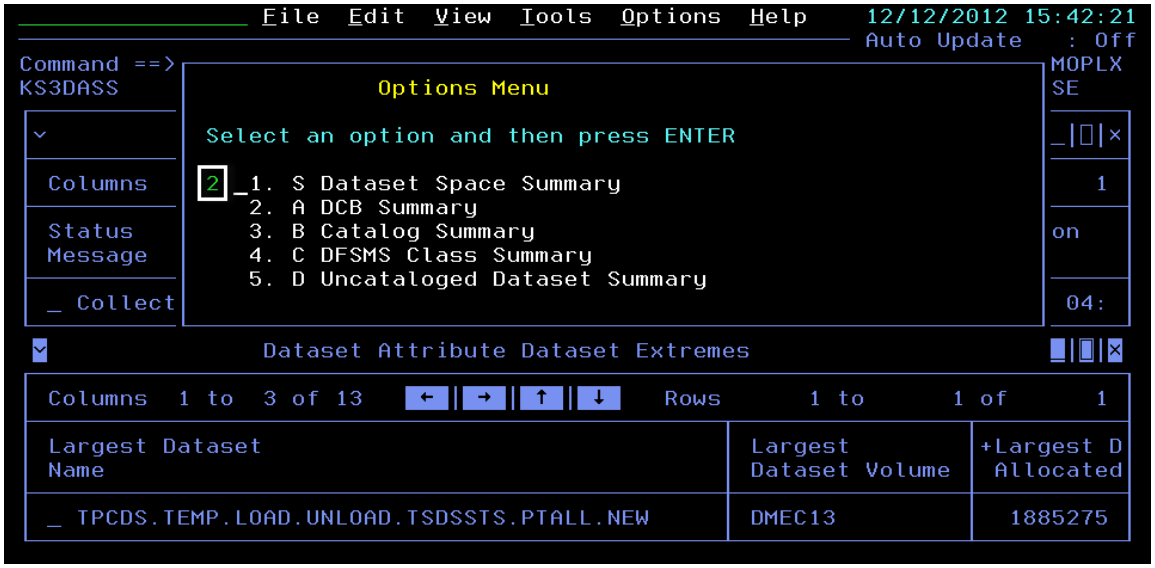



Press **PF3** to return to Dataset Attributes System Summary (KS3DASS).

__5. Display dataset DCB distribution



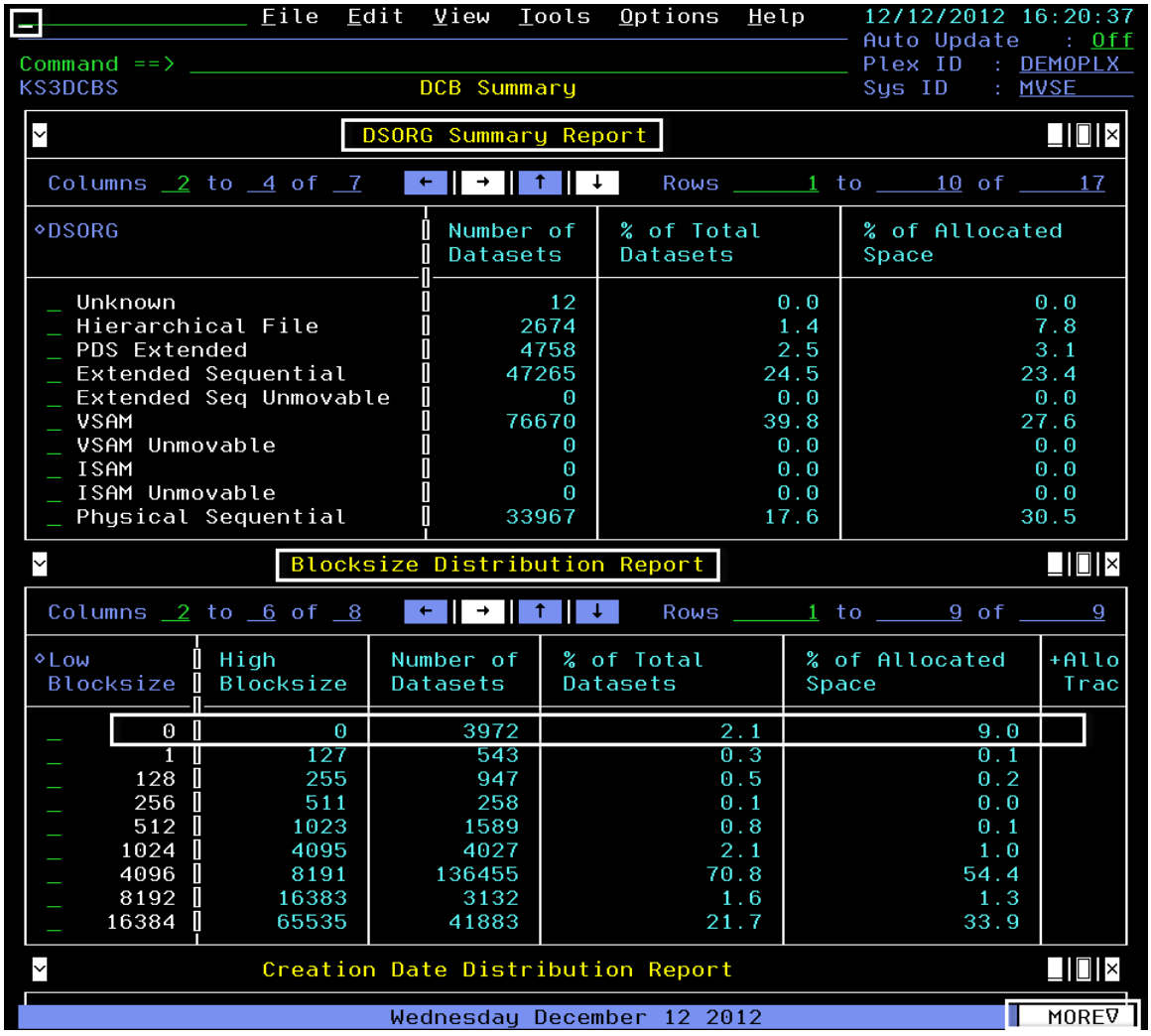

On the KS3DASS screen, place a slash ( / ) next to the largest dataset name and press **ENTER**.




Select Option – **2** - and press **ENTER**.

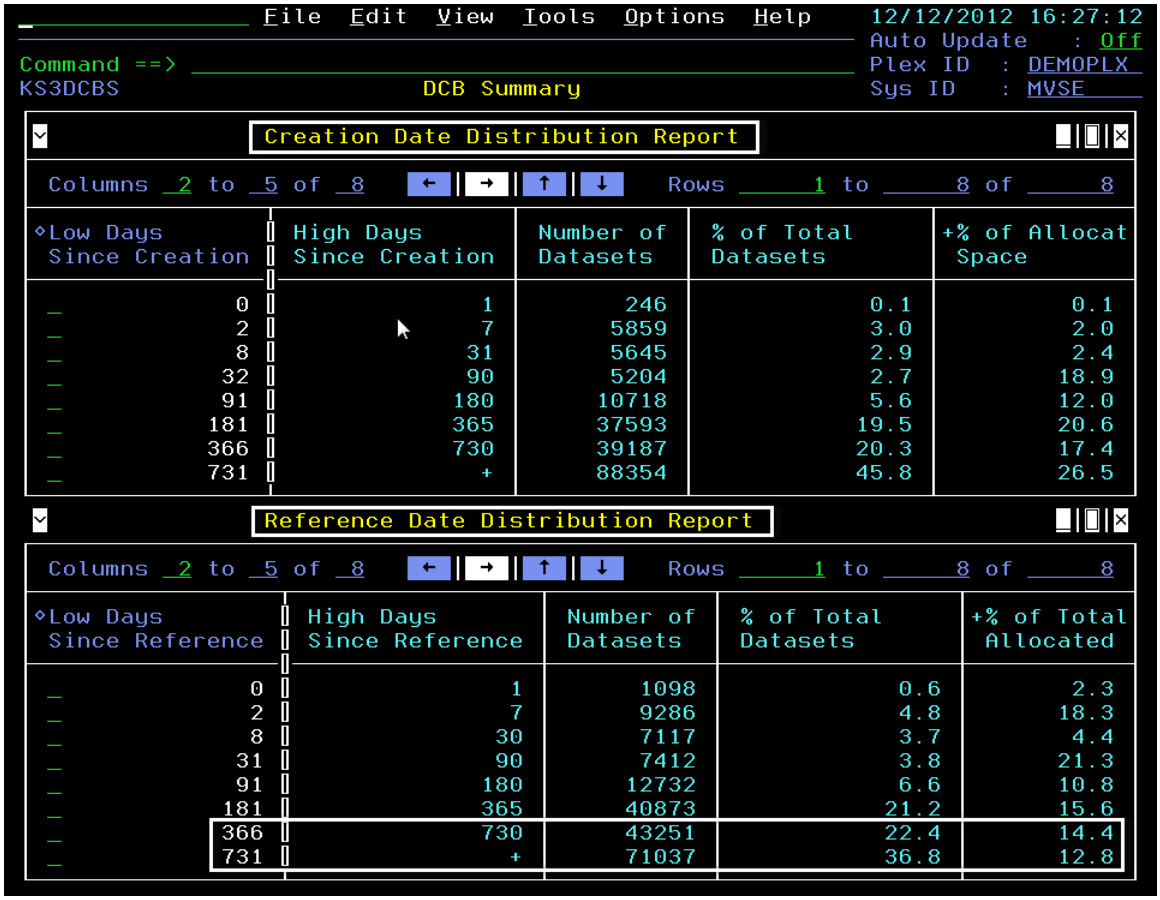
The 1st page of the DCB Summary provides views by dataset organization and block size. These reports could help identify space not being utilized effectively. In the example below 9% of the allocated space is being used by datasets with a 0 block size and could warrant further investigation.

More data is available by scrolling down.




Press **PF8** to scroll down.

The 2nd page (if using the default screen size) of the DCB Summary provides views by dataset age and reference date. Note in the example below that there are several thousand datasets that have not been referenced in a year or more. These datasets represent nearly 60% of the total datasets and over 25% of the total allocated space. These may be candidates for migration.



File Edit View Tools Options Help 12/12/2012 16:27:12
Auto Update : Off
Command ==> Plex ID : DEMOPLX
KS3DCBS DCB Summary Sys ID : MVSE

Creation Date Distribution Report

Columns 2 to 5 of 8 Rows 1 to 8 of 8

| Low Days Since Creation | High Days Since Creation | Number of Datasets | % of Total Datasets | +% of Allocat Space |
|---|---|---|---|---|
| 0 | 1 | 246 | 0.1 | 0.1 |
| 2 | 7 | 5859 | 3.0 | 2.0 |
| 8 | 31 | 5645 | 2.9 | 2.4 |
| 32 | 90 | 5204 | 2.7 | 18.9 |
| 91 | 180 | 10718 | 5.6 | 12.0 |
| 181 | 365 | 37593 | 19.5 | 20.6 |
| 366 | 730 | 39187 | 20.3 | 17.4 |
| 731 | + | 88354 | 45.8 | 26.5 |

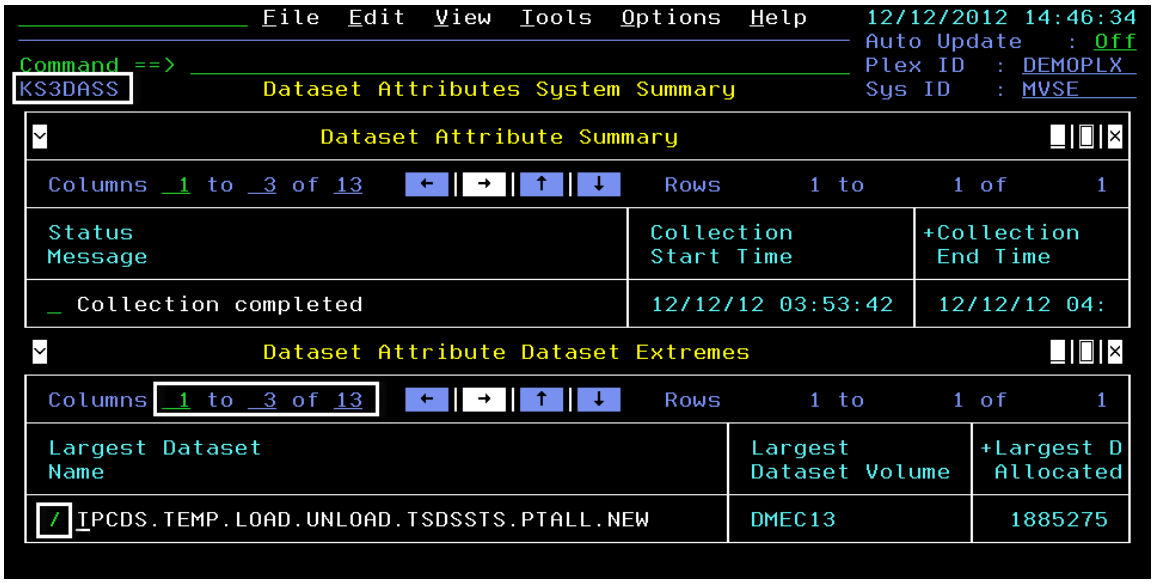
Reference Date Distribution Report

Columns 2 to 5 of 8 Rows 1 to 8 of 8

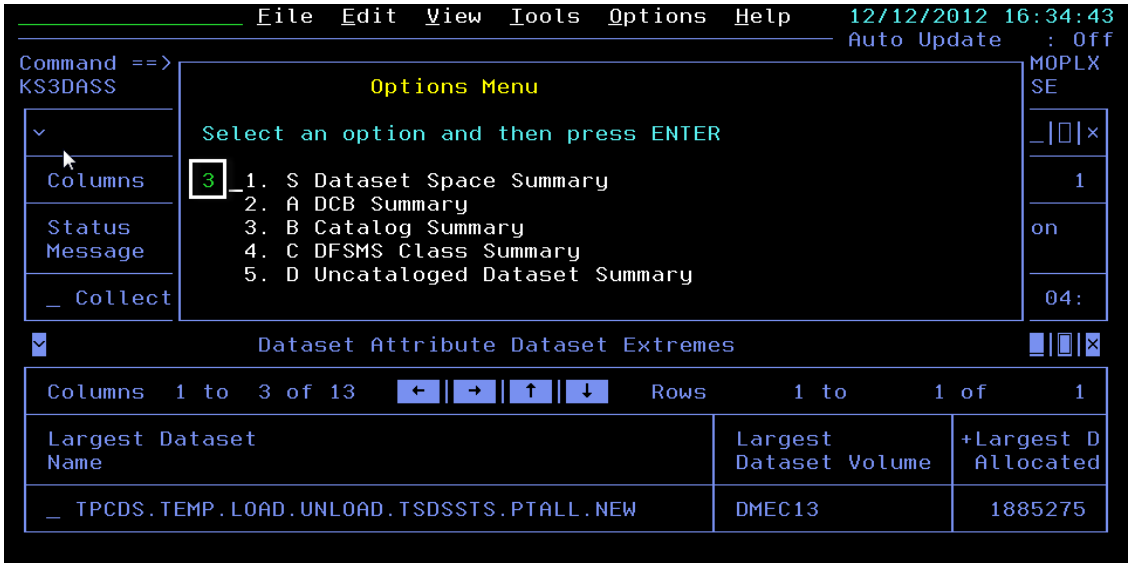
| Low Days Since Reference | High Days Since Reference | Number of Datasets | % of Total Datasets | +% of Total Allocated |
|---|---|---|---|---|
| 0 | 1 | 1098 | 0.6 | 2.3 |
| 2 | 7 | 9286 | 4.8 | 18.3 |
| 8 | 30 | 7117 | 3.7 | 4.4 |
| 31 | 90 | 7412 | 3.8 | 21.3 |
| 91 | 180 | 12732 | 6.6 | 10.8 |
| 181 | 365 | 40873 | 21.2 | 15.6 |
| 366 | 730 | 43251 | 22.4 | 14.4 |
| 731 | + | 71037 | 36.8 | 12.8 |

Press **PF3** to return to Dataset Attributes System Summary (KS3DASS).

__6. Display Catalog summary information



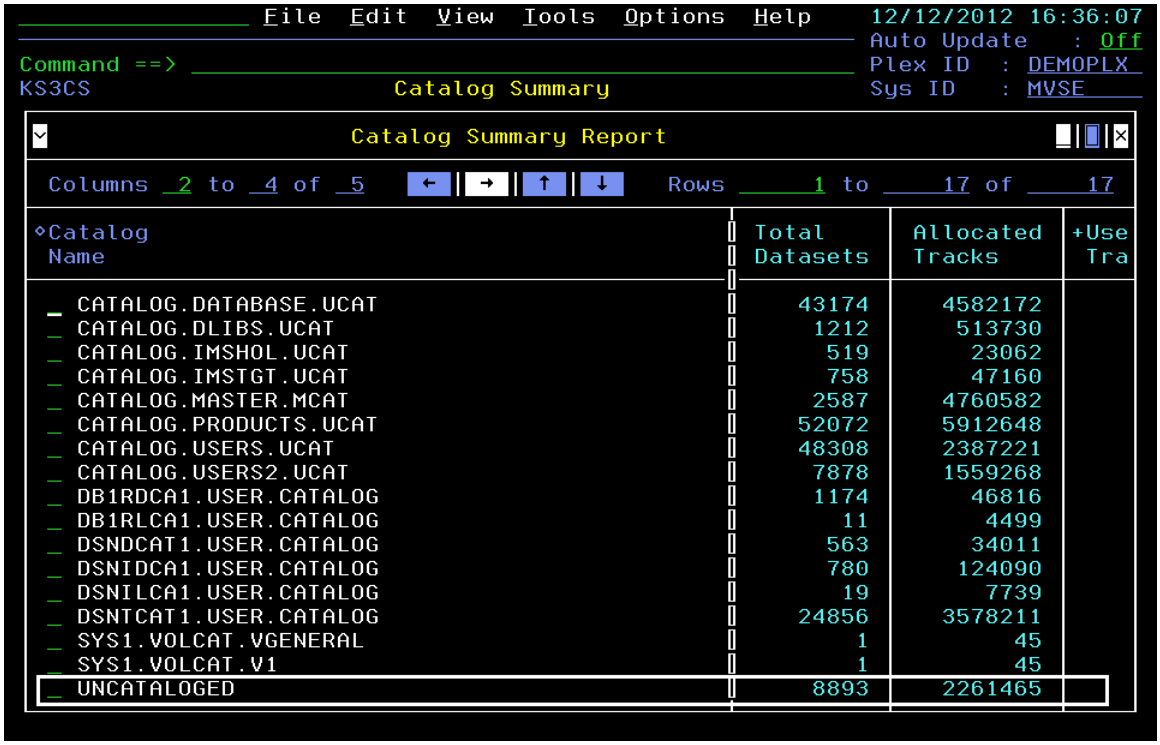

On the KS3DASS screen, place a slash ( / ) next to the largest dataset name and press **ENTER**.




Select Option -3- and press **ENTER**.

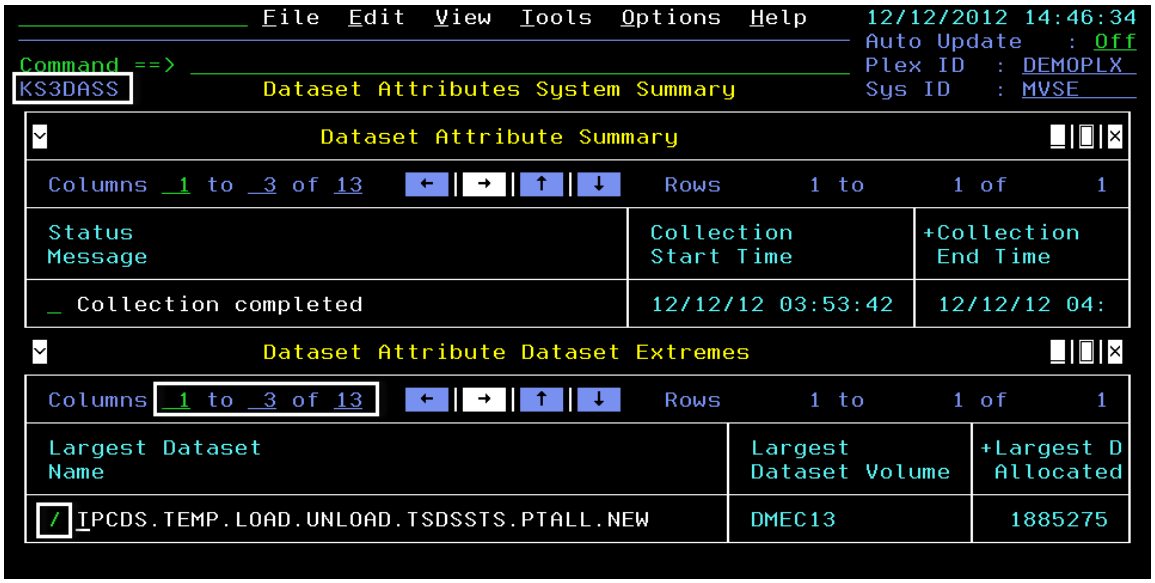
The **Catalog Summary** shows the number of datasets defined to each catalog. In general, it is a best practice to spread catalog entries (high level qualifiers) across several catalogs, in order to minimize the impact of a catalog failure.

While this Catalog Summary Report below shows a reasonable distribution of catalog entries across several catalogs, there appears to be a large number of uncataloged datasets, utilizing a fairly significant amount of space. This could warrant further investigation. While not shown in this lab, a list of datasets within each catalog can be obtained by selecting the respective catalog.

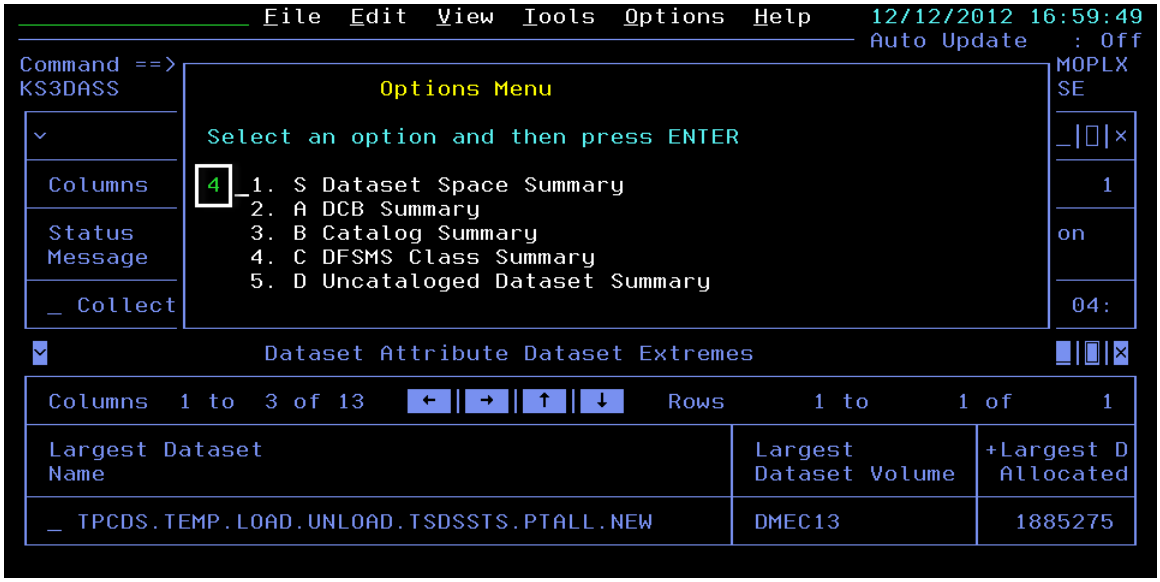



Press **PF3** to return to Dataset Attributes System Summary (KS3DASS).

__7. Display DFSMS summary information




On the KS3DASS screen, place a slash ( / ) next to the largest dataset name and press **ENTER**.



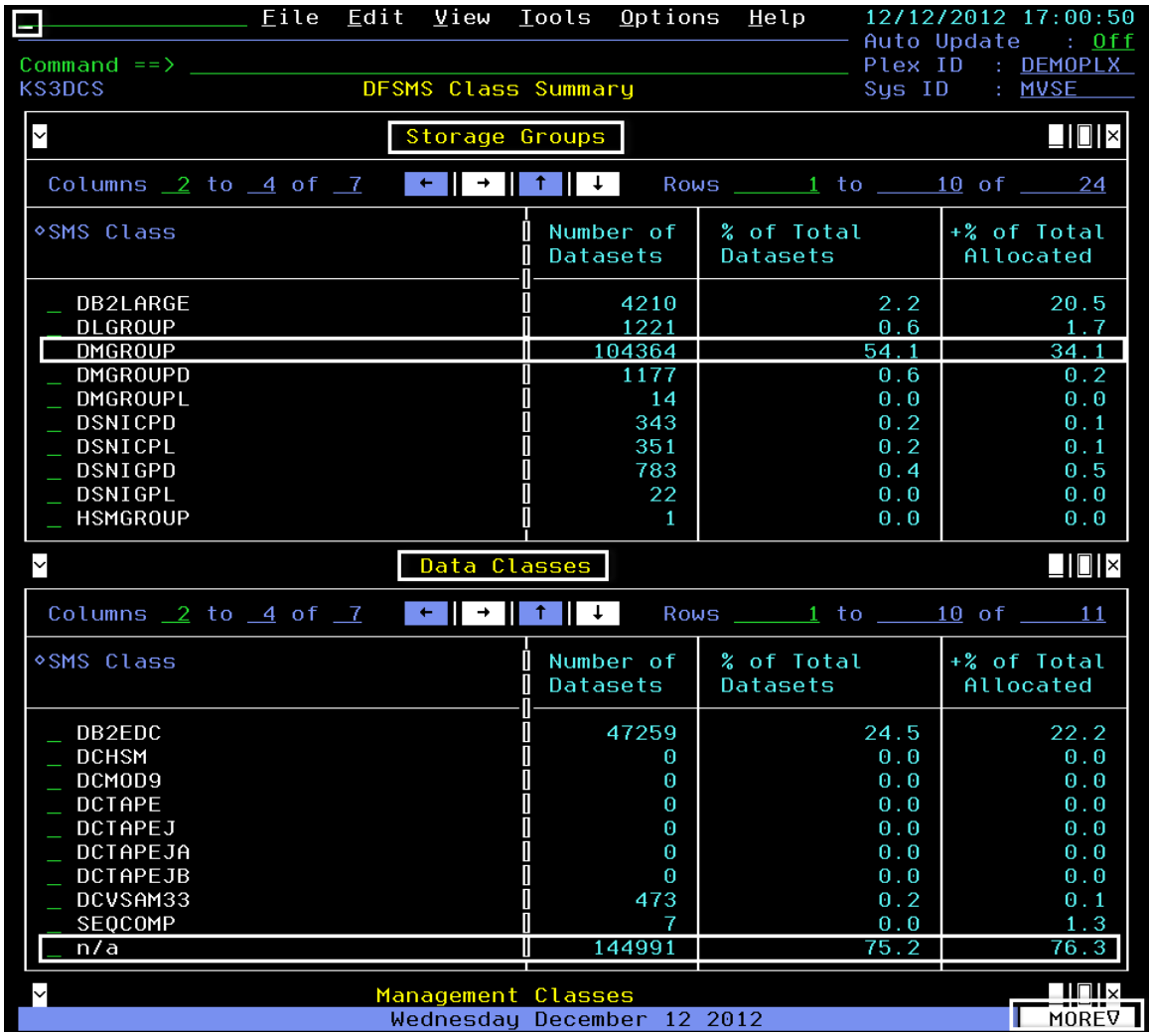

Select Option -4- and press **ENTER**.

The DFSMS Class Summary shows the number of datasets defined to each SMS construct.

Notice that 54% of the datasets, representing 34% of the allocated space, are defined to the Storage Group DMGROUP. Also notice that 75% of the datasets are not assigned to a data class. These may not be problems, but it is still valuable information.

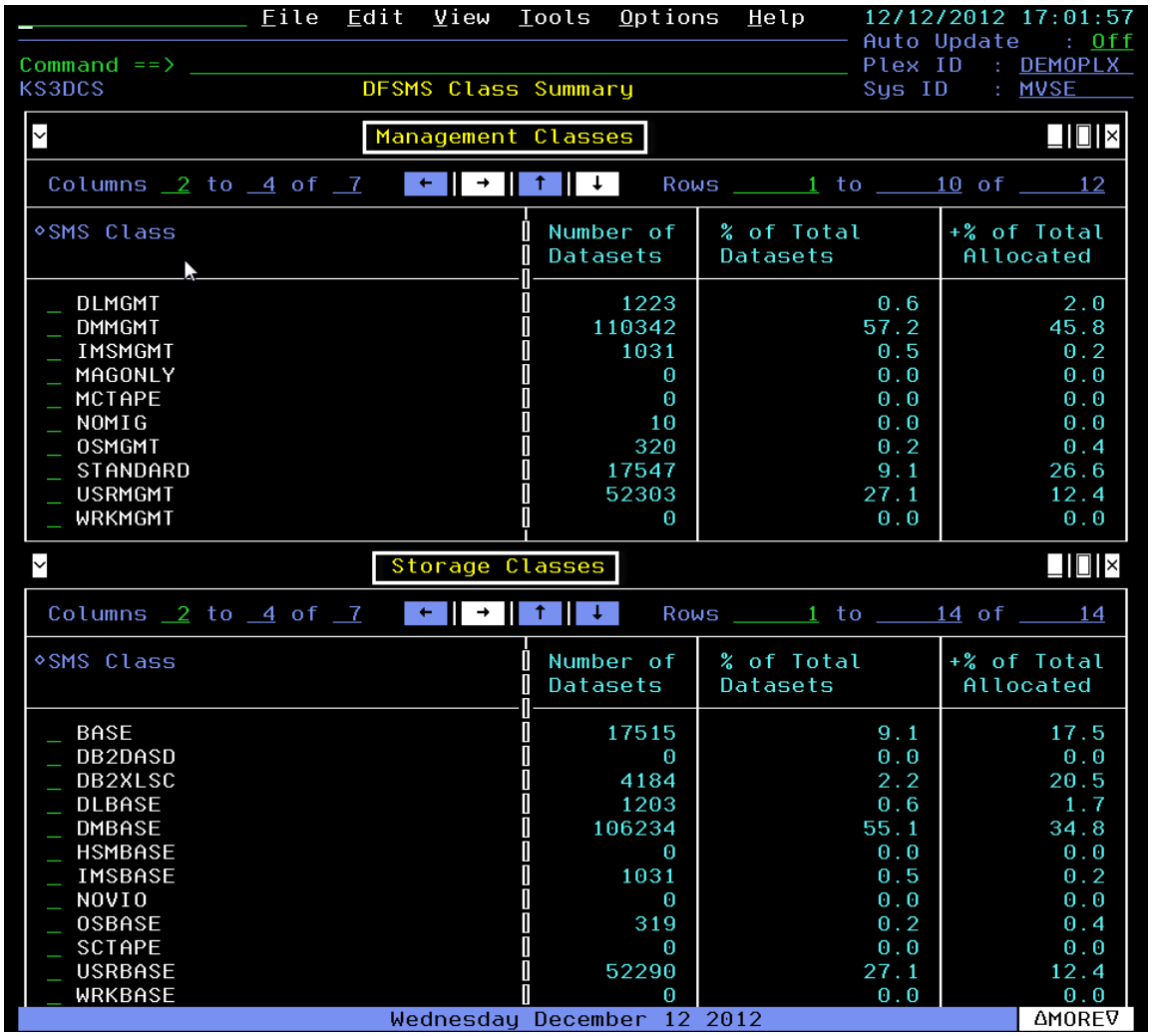
While not shown in this lab, a list of datasets within each construct can be obtained by selecting the respective item.

Additional SMS class information can be found on the next page.



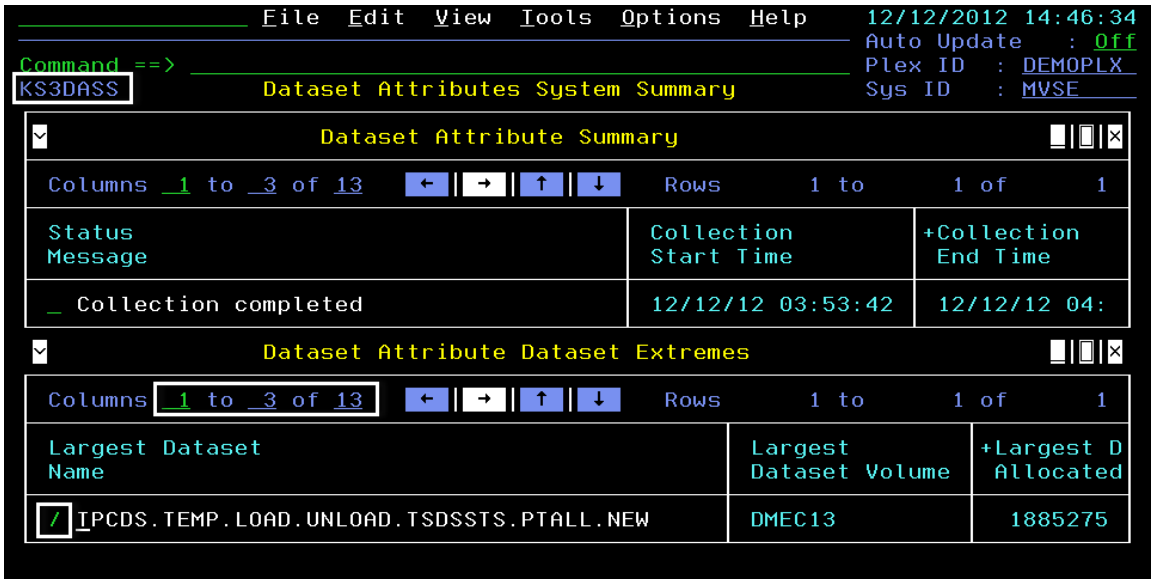

With the cursor in the home position (top left) press **PF8** to scroll down.

The 2nd page (if using the default screen size) of the SMS Class Summary provides dataset statistics for additional DFSMS constructs.

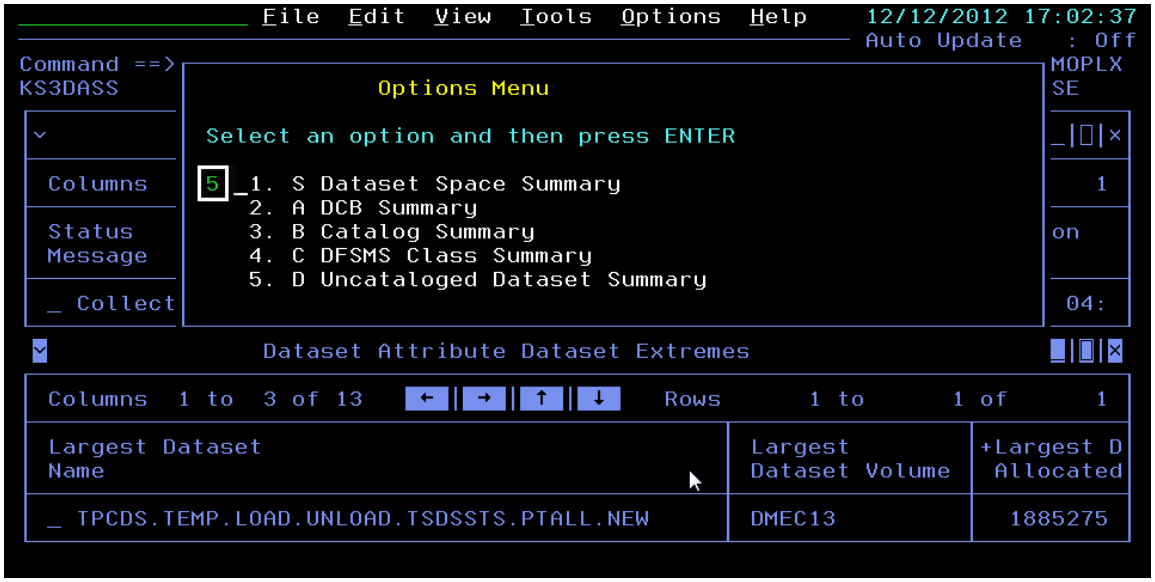



Press **PF3** to return to Dataset Attributes System Summary (KS3DASS).

__8. Display Uncataloged Dataset Information




On the KS3DASS screen, place a slash ( / ) next to the largest dataset name and press **ENTER**.




Select Option – **5** - and press **ENTER**.

The Uncataloged Dataset Summary Report shows the number of uncataloged datasets on each volume. Large uncataloged datasets may be wasting space and should be investigated. While not shown in this lab, a list of datasets on each volume can be obtained by selecting the respective volume.

File Edit View Tools Options Help 12/12/2012 17:03:02
Auto Update : Off
Command ==> Plex ID : DEMOPLX
KS3UDS Uncataloged Dataset Summary Sys ID : MVSE

Uncataloged Dataset Summary Report

Columns 1 to 5 of 5 Rows 1 to 29 of 108

| Volser | Total Datasets | Allocated Tracks | Used Tracks | Unused Tracks |
|---|---|---|---|---|
| DMEA01 | 1 | 1 | 1 | 0 |
| DMECAT | 4 | 6581 | 6552 | 29 |
| DMED08 | 2 | 915 | 915 | 0 |
| DMED10 | 2 | 2 | 2 | 0 |
| DMED12 | 1 | 15 | 15 | 0 |
| DMED31 | 1 | 5 | 5 | 0 |
| DMED35 | 1 | 15 | 15 | 0 |
| DMEH02 | 310 | 32327 | 32327 | 0 |
| DMEI01 | 2 | 2 | 2 | 0 |
| DMEI02 | 367 | 19234 | 5097 | 14137 |
| DMEI03 | 313 | 18634 | 4855 | 13779 |
| DMEI04 | 346 | 19021 | 4999 | 14022 |
| DMEI06 | 354 | 19578 | 5099 | 14479 |
| DMEI07 | 346 | 19021 | 4999 | 14022 |
| DMEI08 | 371 | 19774 | 5080 | 14694 |
| DMEI09 | 10 | 334 | 334 | 0 |
| DMEI10 | 1 | 15 | 15 | 0 |
| DMEI11 | 1 | 15 | 15 | 0 |
| DMEI12 | 4 | 272 | 272 | 0 |
| DMEI13 | 349 | 19531 | 4991 | 14540 |
| DMEI14 | 261 | 11451 | 4661 | 6790 |
| DMEI15 | 357 | 19345 | 5026 | 14319 |
| DMEP01 | 28 | 940 | 73 | 867 |
| DMEP02 | 9 | 960 | 2 | 958 |
| DMEP03 | 10 | 976 | 13 | 963 |
| DMEP04 | 25 | 2404 | 18 | 2386 |
| DMEP05 | 9 | 998 | 8 | 990 |
| DMEP06 | 17 | 2045 | 8 | 2037 |
| DMEP07 | 3 | 405 | 4 | 401 |

Press **PF3** three times to return to the Enterprise Summary (KOBSTART).

**Congratulations!!!** This concludes Lab 3, View Dataset Attribute Details and Exceptions.

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# Appendix C. Documentation Revision History

| Date of Revision | Number | Completed by | Revision Log |
|---|---|---|---|
| 01/16/2013 | V1 | David Mazza | Created and authored OMEGAMON MFN Lab Workbook |
| 02/06/2013 | V2 | David Mazza | Updated with V5.1 PTFs |
| 03/11/2013 | V3 | David Mazza | Updated |
| 03/13/2013 | V3.1 | Lih Wang | Minor edits, packaged OMEGAMON POT 2nd Edition for publishing on iQWorks, total 12 workbooks for 8 products. |
| 01/03/2014 | v4 | David Mazza | Updated with V5.2 corresponding screen shots |
| 01/06/2014 | V4.1 | Lih Wang | Minor edits, packaged OMEGAMON POT 3rd Edition for publishing on iQWorks |
| 9/11/2014 | V6.0 | Ed Woods | Updated for V5.3 to include examples of history data. |
| 9/19/2014 | V530 | Lih Wang | Edits for Enterprise2014 conference lab session. and renamed the file with matching product release number. |

# NOTES

# NOTES







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