OA66417 Publication Updates

DFSMSdss has been enhanced to provide a new utility to assist in planning for management of storage. The utility is a volume compression tool that will allow storage administrators to determine if zEDC Compression would benefit their installation given the current data image on a volume. DFSMSdss will compress every used track on a given volume and provide compression savings estimates.

The following is a summary of the publication updates that will soon be reflected for z/OS 3.1.

z/OS DFSMSdss Storage Administration Reference

A new section titled 'DFSMSdss Utilities' will be added that will contain the existing section of DFSMSdss stand-alone services as a subsection. In addition, a new subsection will be added to 'DFSMSdss Utilities' titled 'DFSMSdss Compression Tool'.

DFSMSdss Compression Tool

The following will be placed in new section 'DFSMSdss Utilities' under new section titled 'DFSMSdss Compression Tool':

This topic, which describes the DFSMSdss compression tool, is intended for anyone who wishes to determine if their volume data would benefit from compression.

The compression tool is utility that:
- Invokes DFSMSdss.
- Establishes zEnterprize Data Compression (zEDC) services capability*.
- Obtains information from the source volume.
- Compresses volume tracks using zEDC in 16K Block increments.
  - Keeps an average input track size
  - Keeps an average output track size (post compression)
- Issues volume free space statistics and an overall average compression savings.

Note:
1. This tool requires the use of zEDC compression services. For further information on requirements for using zEDC, see: https://www.ibm.com/docs/en/zos/3.1.0?topic=opzdcz-requirements-zenterprise-data-compression

New subsections: 'Control' and ' Example of invoking the compression tool'

Control

The following utility control statements are required:

Statement	Use
JOB	Initiates your job
EXEC	Specifies the program name (PGM=ADRVCMPT)
SYSPRINT DD	Defines a sequential message data set. The data set can be written to a system output device, a tape volume, or a direct-access device.
SAMPLEDD DD	Defines the input (also called the source) volume.
output DD	Defines the output. The ddname, *output,* should be defined as a DUMMY DD.
SYSIN DD	Defines a command data set containing a DFSMSdss command. It usually resides in the input stream, however, it can be defined as a blocked or unblocked sequential data set or as a member of a

	partitioned data set. Records must be fixed format, LRECL=80 The SYSIN should describe a DFSMSdss DUMP FULL operation.
PARM statement (required)	The EXEC statement should contain a PARM field with the following: 'ACTION=16KZEDC' – Indicates that the tool should use zEnterprize Data Compression services in 16K block increments.
PARM statement (0ptional)	The EXEC statement may contain a PARM field with the following: 'OPTION=CSVOUT – Indicates that the tool should additionally output a line capturing the statistics and compression results as CSV.

If the above control statements are not as described – unexpected behavior may occur, if not otherwise captured and identified via an error message.

Example of invoking the compression tool

The following example shows how to invoke the compression tool on volume VOL001

```
//MYJOB    JOB   accounting information,REGION=nnM
//STEP1    EXEC  PGM=ADRVCMPT,PARM='ACTION=16KZEDC'
//SYSPRINT DD    SYSOUT=A
//SAMPLEDD DD    UNIT=3390,VOL=SER=VOL001,DISP=OLD
//OUTPUTDD DD    DUMMY
//SYSIN    DD    *
 DUMP FULL INDD(SAMPLEDD) OUTDD(OUTPUTDD)
/*
```

z/OS MVS System Messages, Vol 1 (ABA-AOM) – ADR Messages

ADR208I – Existing

The explanation for this existing message should be updated to reflect that it may also be issued from the DFSMSdss compression tool, without the fragmentation details.

The following is appended to the Explanation section:

This message may also be triggered by the DFSMSdss compression tool.

When the message is issued as a result of a Volume Compression Tool invocation with optional parameter 'OPTION=CSVOUT'. The ADR208I information will be summarized in comma separated values. The values are in this order with the field being the specified number of bytes long:

```
ucbDevNo(2),AvgInputTrkSize(4),AvgOutputTrkSize(4),CompressblockSize(4),Comp
ressSavingsPct(1)
```
```
(n) = bytes represented.  Each byte is a two-character string.
```

ADR584I – New

```
ADR584I (ttt) – mmmmm(yy), THE COMPRESSION TOOL RESULTS ARE AS FOLLOWS:
                          UCB DEVICE NUMBER:                      dddd
                          AVERAGE INPUT TRACK DATA LENGTH:    iiiiiiii
                          AVERAGE OUTPUT TRACK DATA LENGTH:   oooooooo
                          PROCESSED BLOCK LENGTH:                  16K
                          COMPRESSION SAVINGS PERCENTAGE:           ss
```

EXPLANATION:

The DFSMSdss compression tool completed its volume processing without encountering an error. The results are provided such that:

dddd   – is the device number for the input volume
iiiiiiii   – is the average input track size for all allocated and used tracks on the volume
oooooooo   – is the average resulting output track after compression processing
ss   – is the resulting compression savings as calculated by the average input/output
         track lengths

When the message is issued with optional parameter 'OPTION=CSVOUT'. The ADR584I information will be summarized in comma separated values. The values are in this order with the field being the specified number of bytes long:

```
ucbDevNo(2),AvgInputTrkSize(4),AvgOutputTrkSize(4),CompressblockSize(4),Comp
ressSavingsPct(1)
(n) = bytes represented.   Each byte is a two-character string.
```

System Action:
None.

Operator Response:
None.

Programmer Response:
None.

Source
DFSMSdss