CA TLMS

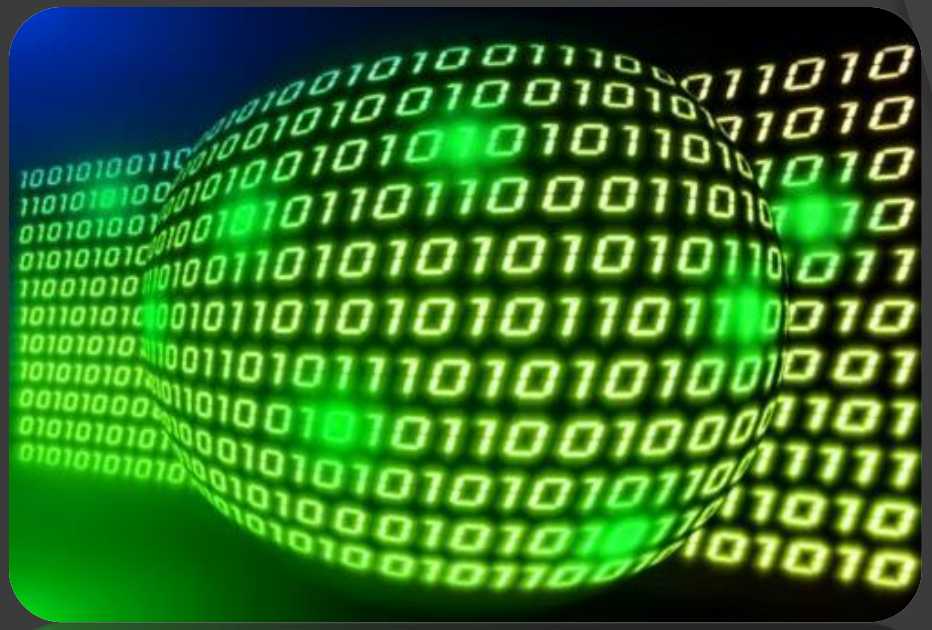
ADDING AND DELETING VOLUME RANGES

CA TLMS VMF

Step by step guide to adding and deleting volume ranges.

The Task at Hand..

- Cleaning up VMF
- Allocation of VMF
- VMF init deck
- Deleting Ranges
- Adding Ranges
- Clean up



Cleaning up the VMF

Summary from CATVMFV

We have all heard the term 'Garbage in Garbage out'. We need to correct any chaining errors before moving forward. A RESTORE of VMF can correct a few chaining errors but can also compound other errors. Feel free to call CA TLMS support to review and help out in cleaning up your VMF chaining errors. Execute PROC CTAPPROC(CATVMFV) to obtain a current status of your VMF

CTAPPROC (CATVMFV)

Proper allocation for the VMF

Allocation of the VMF was hit-or-miss in the past. Grab the totals from the last VMF backup. You can execute proc CATVMFB and get the following totals from the TLMS048 report:

TOTAL BASE RECORDS WRITTEN.....
TOTAL MVL RECORDS WRITTEN.....
TOTAL MDS RECORDS WRITTEN.....
TOTAL AUXILIARY RECORDS WRITTEN.....

Adding up the numbers

If you block the VMF at 5000 bytes, you will get 1500 records per cylinder. To compute the number of records in the VMF, just add up the number of volumes in all of the ranges, add the number of MVL/MDS/AUX Records defined and add about 100 records for various internal records.

Sample TLMS048 Report

```
OMPUTER ASSOCIATES INTL INC          VOLUME MASTER FILE UTILITY FOR ++DUMP                    TLMS048
A TLMS      12.6   1104TLC60                                                                  06/08/2015

                                TOTAL INPUT RECORDS READ.....................230,310
                                TOTAL CONTROL RECORDS WRITTEN.....................1
                                TOTAL SEGMENT RECORDS WRITTEN.....................1
                                TOTAL BASE RECORDS WRITTEN.....................50,250
                                TOTAL MVL RECORDS WRITTEN.....................515
                                TOTAL MDS RECORDS WRITTEN.....................46,383
                                TOTAL AUXILIARY RECORDS WRITTEN.....133,102
                                TOTAL MESSAGE RECORDS WRITTEN.....................50
                                TOTAL PADDING RECORDS WRITTEN.....................8
                                TOTAL AUXILIARY RECORDS ON REUSE.....................0
                                TOTAL RECORDS WRITTEN.....................230,310
                                TOTAL ORPHANED MVL RECORDS.....................0
                                TOTAL ORPHANED MDS RECORDS.....................0
                                TOTAL ORPHANED VSN RECORDS.....................0
                                TOTAL WARNING MESSAGES.....................0
```

Allocation Worksheet

Taking the totals from the TLMS048 report and add up the four totals:

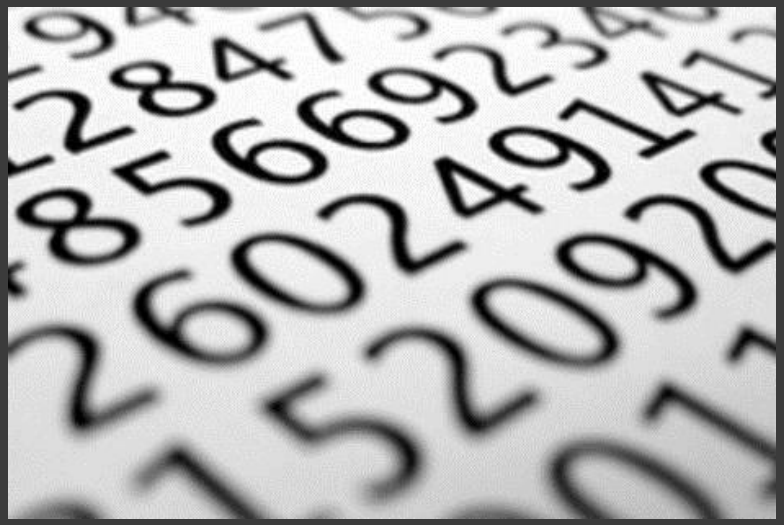
TOTAL BASE RECORDS WRITTEN.....	50,250
TOTAL MVL RECORDS WRITTEN.....	515
TOTAL MDS RECORDS WRITTEN.....	46,383
TOTAL AUXILIARY RECORDS WRITTEN.....	133,102

	230,250
+	100 - Internal records.

	230,350
/	1,500 - Blocked at 5,000
	---
	154 CYLS

Obtain the current VMF deck

- The first thing you need to do is run PROC CTAPPROC(CATVMFID) against the current production VMF.



- Save the SYSPRINT to CAI.CTAPOPTN(TLMSIDCK). This will be the init deck we will use for the new VMF.

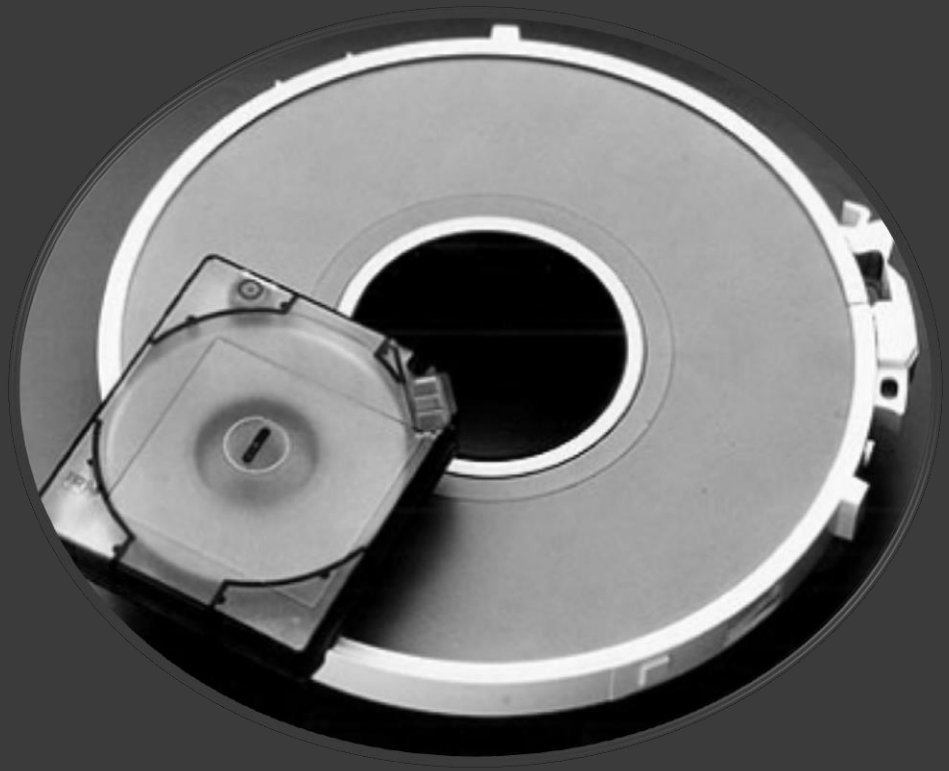
Sample TLMSIDCK

```
/*          VMF INIT-DECK FOR TLMS R12.6 SYSTEM                    */
/*                                                                 */
/* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *     */
/*    NEW CLIENTS CODE THIS MEMBER FROM YOUR INSTALLATION          */
/* WORK SHEET.                                                     */
/*                                                                 */
/*    CLIENTS CAN RUN PROC CATVMFID AGAINST THEIR VMF TO GET       */
/* A LISTING OF THE STATEMENTS TO RECREATE THEIR VMF               */
/*                                                                 */
/* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *     */
CONTROL COMPANY(YOUR COMPANY NAME           )
CONTROL AUX=050000 WARNING=045000 MESSAGE=Y SCRATCH=Y
CONTROL CPU(SYS1/A SYS2/B SYS3/C SYS4/D SYS5/E SYS6/F SYS7/G)
RANGE VSN(000000 500000) DATE=14120 MFG=STK TYPE=AT LEN=8000
RANGE VSN(V00000 V50000) DATE=15212 MFG=IBM TYPE=VT LEN=2000
```

Deleting Volume Ranges

Once the VMF is cleaned up and ready to go, we need to check that there are no crossed chained volumes. Cross chained volumes are volumes that are chained outside of the range you are dropping.

We have a Earl program that will report on any volumes outside of the range you are dropping.



Earl program for volume range removal.

1). Hit the following site to download the Earl program:
https://communities.ca.com/docs/DOC-231154992

2). Upload the Earl program to MVS.

3). The range is supplied on the PARM= operand on the EXEC card.

Example:

PARM='VVVVVV,VVVVVV' (Starting and ending in the range)

4). If there are no cross chained volumes, the job will complete with a RC of 0.

5). Any volumes outside of the range, the job will finish with a RC of 4.

6). These volume series will need to copied out using CA-Copycat to a valid range.

Updating the TLMSIDCK

In this example we are going to drop the V00000-V50000 range:

Before:

```
CONTROL COMPANY(YOUR COMPANY NAME          )
 CONTROL AUX=050000 WARNING=045000 MESSAGE=Y SCRATCH=Y
 CONTROL CPU(SYS1/A SYS2/B SYS3/C SYS4/D SYS5/E SYS6/F SYS7/G)
 RANGE VSN(000000 500000) DATE=14120 MFG=STK TYPE=AT LEN=8000
 RANGE VSN(V00000 V50000) DATE=15212 MFG=IBM TYPE=VT LEN=2000
```

After:

```
CONTROL COMPANY(YOUR COMPANY NAME          )
 CONTROL AUX=050000 WARNING=045000 MESSAGE=Y SCRATCH=Y
 CONTROL CPU(SYS1/A SYS2/B SYS3/C SYS4/D SYS5/E SYS6/F SYS7/G)
 RANGE VSN(000000 500000) DATE=14120 MFG=STK TYPE=AT LEN=8000
```

Process to remove volumes

1). Stop all tape activity and stop CTS.

2). Allocate a new VMF via ISPF 3.4.

3). Execute PROC CTAPPROC(CATVMFB) to back up the VMF. You can change the CAIBVMF DD to DASD instead of tape. The space allocation for the CAIBVMF will be the same as your VMF.

4). Rename the VMF to VMF.OLD. Rename the VMF from step 2 to the production VMF DSN.

5). Execute PROC CTAPPROC(CATVMFRS). Verify that you have the correct TLMS VMF init deck. Check IDCK='CAI.CTAPOPTN(TLMSIDCK)'. Every volume that is dropped in the RESTORE process will be listed in the report. Verify that the proper ranges were deleted in the RESTORE.

6). Insure that the RESTORE did not create any new chaining errors. Execute PROC CTAPPROC(CATVMFV) and review the output.

7). Delete the VMFINDEX and create a new VMF Index using PROC CTAPPROC(CATVMFXI).

8). Bring CTS back up and verify that the volume ranges you dropped are no longer in the VMF. You can check for the old volsers via the TLMS ISPF interface.

Adding Volume Ranges

One thing to remember when adding a new volume range is to increase the number of chaining records. The parameters are AUX and WARNING. AUX is the number of chaining records allocated for use. Warning is the level at which TLMS will start issuing WTO's that you have reached the threshold. It's best to keep the WARNING at 80% of the number of AUX allocated.

Updating the TLMSIDCK

In this example we are going to add the V00000-V50000 range:

Before:

```
CONTROL COMPANY(YOUR COMPANY NAME           )
 CONTROL AUX=050000 WARNING=045000 MESSAGE=Y SCRATCH=Y
 CONTROL CPU(SYS1/A SYS2/B SYS3/C SYS4/D SYS5/E SYS6/F SYS7/G)
 RANGE VSN(000000 500000) DATE=14120 MFG=STK TYPE=AT LEN=8000
```

After:

```
CONTROL COMPANY(YOUR COMPANY NAME           )
 CONTROL AUX=075000 WARNING=065000 MESSAGE=Y SCRATCH=Y
 CONTROL CPU(SYS1/A SYS2/B SYS3/C SYS4/D SYS5/E SYS6/F SYS7/G)
 RANGE VSN(000000 500000) DATE=14120 MFG=STK TYPE=AT LEN=8000
RANGE VSN(V00000 V50000) DATE=15212 MFG=IBM TYPE=VT LEN=2000
```

Process to add volumes

1). Stop all tape activity and stop CTS.

2). Allocate a new VMF via ISPF 3.4.

3). Execute PROC CTAPPROC(CATVMFB) to back up the VMF. You can change the CAIBVMF DD to DASD instead of tape. The space allocation for the CAIBVMF will be the same as your VMF.

4). Rename the VMF to VMF.OLD. Rename the VMF from step 2 to the production VMF DSN.

5). Execute PROC CTAPPROC(CATVMFRS). Verify that you have the correct TLMS VMF init deck. Check IDCK='CAI.CTAPOPTN(TLMSIDCK)'. Verify that the proper ranges were added in the RESTORE.

6). Insure that the RESTORE did not create any new chaining errors. Execute PROC CTAPPROC(CATVMFV) and review the output.

7). Delete the VMFINDEX and create a new VMF Index using PROC CTAPPROC(CATVMFXI).

8). Bring CTS back up and verify that the volume ranges you added are in the VMF. You can check for the new volsers via the TLMS ISPF interface.

Final Clean Up

- Copy the old VMF off to tape via IEBGENER. Hold onto the backup for 60 days in case we have any issues down the road.
- Watch your chaining usage after adding new volumes. We may need to adjust the AUX/WARNING limit. Check the 'Aux records written' in the TLMS048/CATVMFB report.