

## UNIT 3

# Using ALTER, PRINT, DELETE and VERIFY

## **OBJECTIVES**

- ❑ Using ALTER Command
- ❑ Using PRINT Command
- ❑ Using DELETE Command

## ALTER Command

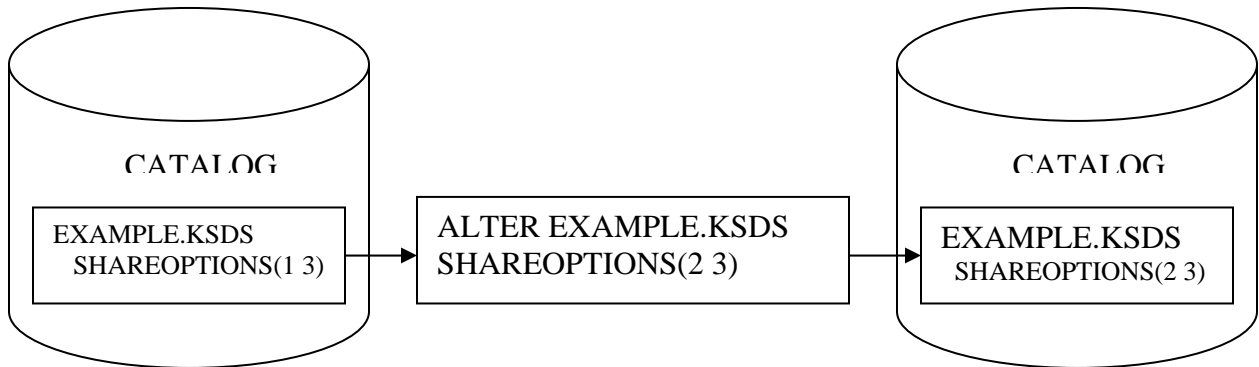


Figure 3-1.

- ❑ You can use this powerful command to change certain attributes of previously defined VSAM object.
- ❑ These objects include base cluster and it's data and index component and even alternate index cluster and it's data or index component and even a VSAM or ICF catalog.
- ❑ If you are properly authorized you can ALTER NON-VSAM data set attributes also.

## **ALTER Command syntax**

ALTER entryname[/password] -  
    SHAREOPTION(cross region cross system)

Many data set attributes can be altered among them

- ❑ ADDVOLUME
- ❑ ATTEMPTS
- ❑ SHAREOPTIONS
- ❑ BUFFERSPACE
- ❑ FREESPACE
- ❑ PASSWORD

ENTRY NAME is the cluster, data or index component name.

PASSWORD is the master password if the VSAM data set is password protected

ALTER can also be used as a migration path to change an ESDS to LDS

## ALTER with ADDVOLUME/REMOVEVOLUME

### ADD VOLUME

```
//ALTJOB   JOB    ,,NOTIFY=userid
//STEP1    EXEC   PGM=IDCAMS
//SYSPRINT DD     SYSOUT=*
//SYSIN     DD     *
            ALTER                                -
            USER1.KSDS.DATA                      -
            ADDVOLUMES(VS012)
```

### REMOVE VOLUME

```
ALTER
USER1.KSDS.DATA      -
REMOVEVOLUME(RTD2)
```

### ALTER WITH FREESPACE

```
ALTER entryname[/password] -  
FREESPACE(CI-percent[ CA-percent]))
```

```
//ALTJOB    JOB    .....  
//STEP1     EXEC   PGM=IDCAMS  
//SYSPRINT  DD     SYSOUT=*  
//SYSIN     DD     *  
            ALTER          -  
            USER1.KSDS.DATA -  
            FREESPACE(30 30)
```

Entryname must be the name of the cluster's data component.

This procedure has the following advantages.

- ❑ It prevents wasting space.
- ❑ It minimizes CI and CA splits.

## ALTER WITH NEW NAME

ALTER entryname[/password]        -  
NEWNAME(name)

```
//ALTJOB   JOB   .....  
//STEP1    EXEC  PGM=IDCAMS  
//SYSPRINT DD    SYSOUT=*  
//SYSIN    DD    *  
           ALTER          -  
           USER1.KSDS.DATA      -  
           NEWNAME(USER1.LIB.KSDS)
```

## ALTERING PASSWORD

Adding/Changing PASSWORD

```
ALTER entryname[/password] -  
    [READPW (password)] -  
    [UPDATEPW (password)] -  
    [CONTROLPW (password)] -  
    [MASTERPW (password)]
```

Nullifying PASSWORD

```
ALTER entryname[/password] -  
    NULLIFY -  
    [READPW] -  
    [UPDATEPW] -  
    [CONTROLPW] -  
    [MASTERPW ]
```



## DELETE COMMAND

**DELETE** entry name/password

The IDCAMS DELETE command can be used to delete both VSAM and non-VSAM objects.

Some options for Delete are

- ☐ ALIAS
- ☐ ALTERNATEINDEX
- ☐ CLUSTER
- ☐ SPACE
- ☐ PURGE
- ☐ PATH

## DELETE EXAMPLE

```
//ALTJOB   JOB   .....  
//STEP1    EXEC  PGM=IDCAMS  
//SYSPRINT DD    SYSOUT=*  
//SYSIN    DD    *  
           DELETE  
           USER1.KSDS.CLUSTER
```

## PRINT COMMAND

**PRINT INDATASET(dataset name) CHAR**

- ❑ The PRINT command prints VSAM data set, non-VSAM data set and catalogs.
- ❑ The INDATASET, INFILE, OUTFILE parameter can be used to specify the input or output data set.

### PRINT EXAMPLE

```
//ALTJOB   JOB   ..... .  
//STEP1    EXEC  PGM=IDCAMS  
//SYSPRINT DD    SYSOUT=*  
//DD1      DD    DSN=USER1.LIB.KSDS,DISP=OLD  
//SYSIN     DD    *  
            PRINT                -  
            INFILE(DD1)          -  
            FROMKEY(MARTIN)      -  
            TOKEY(ALEX)
```

There are three print formats for out put

- ❑ CHAR
- ❑ HEX
- ❑ DUMP (default) this is combination of char and hex

## PRINT EXAMPLE

### PRINT INDATASET(USER1.LIB.KSDS) CHAR

```
LISTING OF DATA SET – USER1.LIB.KSDS
KEY OF RECORD – 000001
MARTIN 000001
KEY OF RECORD – 000002
JOHN 000002
KEY OF RECORD – 000003
PAUL 000003

| DC005 | NUMBER OF RECORDS PROCESSED WAS 3
| DC001 | FUNCTION COMPLETE, HIGHEST CONDITION CODE WAS 0
```

### PRINT INDATASET(USER1.LIB.KSDS) HEX

```
LISTING OF DATA SET – USER1.LIB.KSDS
KEY OF RECORD – 000001
C1C2C3C4C5C6C7C8U7U6Y5T4 000001
KEY OF RECORD – 000002
V1V2V3V4V5V6V3V3V 000002
KEY OF RECORD – 000003
4N4NY5T4T3E3W2G5G5 000003

| DC005 | NUMBER OF RECORDS PROCESSED WAS 3
| DC001 | FUNCTION COMPLETE. HIGHEST CONDITION CODE WAS 0
```

### PRINT INDATASET(USER1.LIB.KSDS) DUMP

```
LISTING OF DATA SET – USER1.LIB.KSDS
KEY OF RECORD – 000001
C1C2C3C4C5C6C7C8U7U6Y5T4 000001 * MARTIN 000001*
KEY OF RECORD – 000002
V1V2V3V4V5V6V3V3V 000002 * JOHN 000002*
KEY OF RECORD – 000003
4N4NY5T4T3E3W2G5G5 000003 * PAUL 000003*

| DC005 | NUMBER OF RECORDS PROCESSED WAS 3
| DC001 | FUNCTION COMPLETE, HIGHEST CONDITION CODE WAS 0
```

Figure 3-2.

## **PRINT RECORD SELECTION**

Where to start

Where to stop

FROMKEY(rec-key)

TOKEY(rec-key)

FROMADDRESS (rba)

TOADDRESS(rba)

FROMNUMBER(rrn)

TONUMBER(rrn)

SKIP(number)

COUNT(number)

number = Number of records

key-value = Record key for a KSDS

rba = relative byte address for a record in a KSDS or ESDS

rrn = Relative record number(slot) for RRDS records

## VERIFY COMMAND

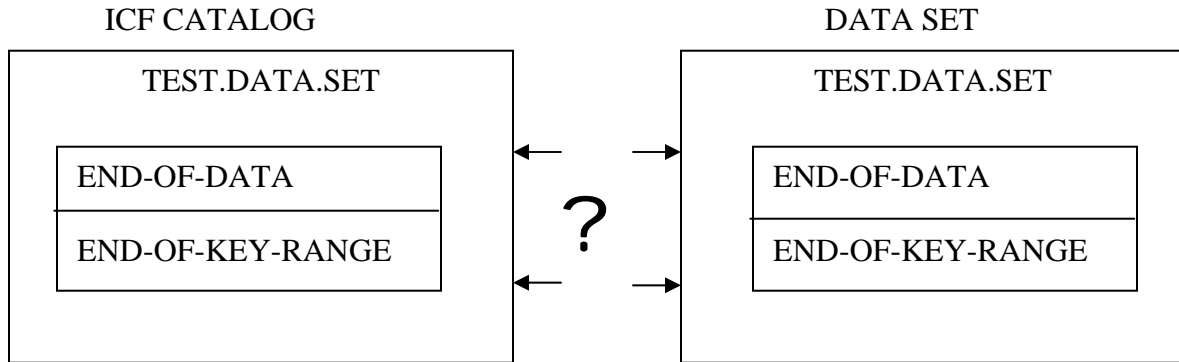


Figure 3-3.

### VERIFY:

- ❑ COMPARES CATALOG INFO WITH THE DATA SET
- ❑ CORRECTS CATALOG IF A DISAGREEMENT IS FOUND
- ❑ Run VERIFY after a system failure.
- ❑ When sharing data sets, run VERIFY before opening a data set.
- ❑ At OPEN, VSAM issues implicit a VERIFY when it detects an open-for-output Indicator on and issues a message stating whether VERIFIES is successful.
- ❑ VERIFY cannot be used for an empty data set or an LDS.

## VERIFY EXAMPLE

```
//TEST      EXEC    PGM=IDCAMS
//SYSPRINT   DD      SYSOUT=A
//SYSIN      DD      *
LISTCAT     ENTRIES(TEST.DATA.SET) -
              ALL

VERIFY      DATASET(TEST.DATA.SET)

LISTCAT     ENTRIES(TEST.DAT.SET) -
              ALL
```

The VSAM VERIFY macro can be invoked from an assembler program.

VERIFY is recommended before opening a data set shared by multiple systems.



***Unit 3 Exercises***

***Unit 3 Lab Exercises***