100 COOL MAI NFRAME T I PS

100 COOL MAINFRAME T I PS

JONATHAN JEBAN MARTIN

100 COOL MAI NFRAME T I PS

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***Preface***

**This e-Book is collection of all the tips that have been published in the MVSTIPS Yahoo!**

**Groups. The sources for these tips are manuals, books, websites, mainframe forums and**

**group members’ contribution. Also one can visit tips online at**

HTTP://GROUPS.YAHOO.COM/GROUP/MVSTIPS.

**For comments, feedbacks, errata on this booklet, please send your mails to**

**jjeban@yahoo.com.**

**With Warm Regards,**

**Jonathan Jeban Martin**

20-Oct-04

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***ISPF***

**TIP # 001**

**ISPF**

Let’s start with a generic and simpler one.

Consider that you are editing a file/program and you want to know the changes you have done

since the last SAVE command.

How to find that?

**Answer:**

Give COMPARE SESSION on the command line

Further use of COMPARE commands...

- Can be used like 3.13 option

**TIP # 002**

**ISPF**

Usually, the PDS or PS bears the ID of the creator or the ID of the person who modified it

recently. But is it possible to change these ID values without leaving trace of one’s own ID?

**Answer:**

Yes, it’s possible! In the command area against the member’s name or PS name, by giving ‘G’.

Dialog box will pop up allowing you to change the ID values.

**TIP # 003**

**ISPF**

Suppose you are in a ISPF Screen and want to know in which TSO Region (Development,

Production, or other TSO regions) you are now.

**Answer:**

Issue on the command line: **SAREA**

ISPF STATISTICS Pop-up window will show you the region( and other info too)

**TIP # 004**

**ISPF**

Any command entered in the COMMAND LINE disappears after the successful execution of its

intended function.

If you want to repeat the same command , you got to re-type it or use some PF key to retrieve the

last command entered.

But here is a cool method the make the command entered not to disappear and stay on the screen.

Precede commands with '&'

For Example:

COMMAND ===> &C '110-PARA' '220-PARA' SCROLL ===> CSR

\*\*\*\*\*\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* TOP OF DATA \*\*\*\*\*\*\*\*\*\*\*\*\*\*

000001 IDENTIFICATION DIVISION.

000002 PROGRAM-ID. COBOLSAMY.

000003 DATE-WRITTEN. APRIL 2004.

After the execution of the command, the below command stays on the screen.

This way you can entering the same command or modifying the command a little and using it

multiple times.

**TIP # 005**

**ISPF**

While trying to open any member in a PDS, we sometimes come across

"member in use" message. In that situation, if you want to know who is using the member

currently, press F1 *twice or whohas or whosgot*.

**TIP # 006**

**ISPF**

We usual search for members in a PDS by the first string of the members.

Consider this situation .

I have a PDS and I want to search it for member only by middle string of the members.

e.g. there are some members like BESTJCL1,RESTJCL2,PEST**CBL**1, BEST**CBL**2,

WEST**CBL**3,TESTASM1,BESTASM2...etc

I want to find members which have **CBL** in them.

How can I search and find these members?

**Answer:**

Use **ISPF 4.12** option.

Specify the dataset to be searched and the pattern of the string.

Specify the LANG type as COB

And select the browse option.

**TIP # 007**

**ISPF**

How can I find the last 10 datasets that I have *accessed* ?

**Answer:9**

1.GO TO ISPF 3.4 option.

2. On the top, there is a MENUBAR. Select REFLIST

3. Select Option 1 in it.

Using this option you can find out the *last 30 datasets* that you have accessed....

**TIP # 008**

**ISPF**

Alternate to SuperCE Option(3.13) is to use the macro COMPARE .

Use this when you there is less difference between the two files.

1.Open a DSN in EDIT or VIEW Mode

2. On the Command line , issue **COMP 'YOUR.SECOND.COMPARISON.DSN'**

3. If you want only the changes to be listed, issue **COMP**

**'YOUR.SECOND.COMPARISON.DSN' EXC**

**TIP # 009**

**ISPF**

While Browsing Internet, we have some cool option called address *autocomplete*…we enter

some letters in the address bar and the browser auto completes it with the closest guess.

Does MAINFRAME has the same feature??

**Answer:**

Yes! It has “Autocomplete” feature!!!

How to use it?

1.go to ISPF 3.4 ,

2. enter KEYS in the command line,KEYS window will popup

3. set any key to AUTOTYPE, save and exit

2. now type any Dataset partially and press the assigned PFkey!!

Note: It will not retrieve GDGs and VSAM files.

**TIP # 010**

**ISPF**

I want to find a member but I don’t know the PDS to which it belongs. I only know the high

level qualifier of the PDS.

**Answer:**

For example, lets consider high level Qualifier as MYID.MYAPPLN.\* and member as MYMEM

1. Go to 3.4 and list all PDS with MYID.MYAPPLN.\*

2. Now issue, MEMBER MYMEM on the command line

**TIP # 011**

**ISPF**

I want to know what are the last 25 COMMAND LINE commands that I have issued from ISPF

panel.

**Answer:**

To get that, I have to issue, RETP on the Command line.

**TIP # 012**

**ISPF**

I want to edit a member, which has CBL as middle string in the PDS MY.PDS.MEMBERS.

One shortcut way is to in the ISPF 3.4 listing of the PDS,

issue S \*CBL\* E in the command line. If we don’t use E at the end, it will open in browse mode.

**TIP # 013**

**ISPF**

Here is another tip on ISPF 3.4 Option

Usually to find the last edited member, we issue SORT CHA or SORT CHANGED on

the command line.

One can save few keystrokes by placing the cursor on any of the column

header in the ISPF 3.4, and press ENTER.

In our case, if we place the cursor on the CHANGED header, we will get the

members sorted on that column.

**TIP # 014**

**ISPF**

Here is a tip by which you can avoid ISPF 3.4 Option!!!

To Open a PS or PDS member, we usually use ISPF 3.4 to open in EDIT or BROWSE

MODE.

Here is one way where one can open PS or PDS member in EDIT/VIEW/BROWSE

mode from any command line.

Thus, we can avoid using 3.4 option.

Issue : EPDF ‘MYID.MYPS’ . The Dataset will be opened in EDIT MODE

If you want to open in VIEW mode:

Issue : EPDF ‘MYID.MYPS’ VIEW

Similarly, for opening in BROWSE mode, type BROWSE at the end.

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**TIP # 015**

**ISPF**

Here is a situation. I have received a maintenance change

request on one of the program.

While I am making changes to the program, one of my friend pops

in and I leave with him for a cup of coffee without SAVING the

changes I made.

After few minutes , when I am back, I am not sure what changes I

made previously on the program?

How can I find the changes I have made (without getting out of

this screen)?

Well, here is one simple command line command to achieve this...

Issue : COMP \* X

**TIP # 016**

**ISPF**

When I issue CUT , I know that the CUT content are placed in a

clipboard. And when I issue PASTE, the clipboard content are

pasted.

But is it possible for me to view/edit the clipboard ?

One can view the clipboard after any valid CUT command was issued.

To view the clipboard, issue : CUT DISPLAY. This command needs to be used while editing member/PS file

Clipboard manager will pop up and gives us options to edit or browse the

content.

**TIP # 017**

**ISPF**

Here is another tip on ISPF CUT. I have a dataset with 10,000

lines.I want to cut the first 10 lines and last 10 lines and

paste into another dataset.When I cut the first 10 lines and

then again the last 10 lines ,only the last 10 lines are pasted

into the new dataset.

Is there anyway out (other than doing a 2 cut & paste)?

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The answer for the above question is to:

1.first cut 10 lines, then issue CUT APPEND

2.then cut last 10 lines, then issue CUT APPEND

3.When you PASTE it, you got both.

**TIP # 017**

**ISPF**

Tired of typing the often-used datasets repeated?!!!

We have seen AUTOTYPE previously. Here is another one that saves lots of key-strokes.

Use NRETRIEV.

How to use it?

1 enter KEYS in the command line,KEYS window will popup

2 set any key to NRETRIEV and exit

3 now when you are in 3.4 or whichever screen you have set the KEYS option, press the

assigned PF keys.

4. Pressing them repeated will bring up one-by-one the last 30 accessed datasets from the reflist.

**TIP # 018**

**ISPF**

Here is one simple one.......

I want to search a string like **'abc' (including quote).**

In my pgm there may be more **abc** strings.But i don't want to retrieve all of them.

i need the **abc** enclosed with **quotes**.

How to search is in 3.14 option?.

In the ISPF 3.14 , search with ‘’’abc’’’ string.(i.e. with 3 quotes at both sides of the string)

**TIP # 019**

**ISPF**

I have to compare one input file field with one output file field. The input file field in is column

1 to 10 and the output file field is in column 40 to 50.

How can I do it?

1. Use the standard 3.13 ISPF option. In the same screen itself, in the command line issue, E

2. then type,

CMPCOLN 40:50

CMPCOLO 1:10

(OR)

CMPCOLMN 40:50

CMPCOLMO 1:10

3. press PF3 and exit

4. In the New dataset , type in the output dataset

5. In the Old dataset , type in the input dataset

**TIP # 020**

**ISPF**

Is an easy way to search member in Multiple PDS?

Go to 3.4 (where all the datasets will be displayed) .

In the Command line give

Command line==>M memname

This command will not work for the migrated PDS. So ensure all the PDS are in

Disk.

Now the message "MEMBER(S): memname found" will apppear in the right side of

the panel.

**TIP # 021**

**ISPF**

I have data which is of length 160. For some reasons, I want to wrap the data in each record to 80

characters and have the next 80 characters in the next line. So basically what I am looking for is ,

“Is there command similar to **Wordwrap** (as in Notepad or MS WORD) in mainframe?”

Yes, with ISPF, one can wrap the data as required.

To do that,

1.Open the dataset in ISPF EDIT mode.

2.In the first line, issue the line command: TF80 (as in this case I want to wrap to 80 chars per

line)(you need to enter in the line number field)

3.All the subsequent lines will wrap to 80 chars per line.

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**TIP # 022**

**ISPF**

Here is another tip on ISPF 3.4 option

From the ISPF 3.4 option listing, I can directly Edit/Browse/view the member without listing all

the members and then select the particular member.

To do that,

In the Line command issue, **E / (member)**

use for Browse (B) and view (V)

Command - Enter "/" to select action Message Volume

-------------------------------------------------------------------------------

E /(MEMBER1)MYID.WORK.SRC NV1E56

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Data Set list \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Or

E MYID.WORK.SRC NV1E56 (Member1)

***JCL***

**TIP # 023**

**JCL**

**Hero's Method:**

If you prefer a dataset to be not deleted accidentally, then

---------------------------------------------------------------------------------------------------------------------

**USING IDCAMS USING JCL COMMENTS**

---------------------------------------------------------------------------------------------------------------------

TO(04365) LABEL=RETPD=04365 Will protect till end of 2004

FOR(30) LABEL=RETPD=10 Will protect for 30 days

---------------------------------------------------------------------------------------------------------------------

**Villain's Method:**

If by chance of fate, you want to delete a dataset that is protected by the above method...

Use IDCAMS DELETE command with PURGE option.

e.g.,

//STEP1 EXEC PGM=EXEC

//SYSPRINT DD SYSOUT=\*

//SYSIN DD \*

DELETE TOP.SECRET.DATA -

PURGE

/\*

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**TIP # 024**

**JCL**

Is it possible to execute a program from any library using the referback?

The Answer is Yes!

//STEP1 EXEC PGM=IEFBR14

//PROGRAM DD DSN=SYSTEM.PGM.LOADLIB(COBOLPGM),DISP=SHR

//STEP2 EXEC PGM=\*.STEP1.PROGRAM

**TIP # 025**

**JCL**

How does the system differentiates between JCL comment statements (i.e., //\* statements) and

JES3 Statements (which also start with //\* ) ?

If the 4th column contains **JES3 keyword**, the line is considered to be JES3 statement, else it is

considered as normal JCL statement.

**TIP # 026**

**JCL**

We know JES2 and JES3 , but is there any JES1?

OS/VS1 (the forefather of MVS) supported only one job entry subsystem *namely* JES1

**TIP # 027**

**JCL**

Consider this situation.

I have a JCL with 10 steps.

For reasons known only to me, I want to execute step 5 only.

How can I do it?

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One way to do it is to use RESTART from STEP05, but it will try to execute the

subsequent steps too.

We have to insert null statement after step05 to prevent the execution of

subsequent steps.

But one decent way is there in which we don’t need to touch the job steps

code, but alter only the Jobcard.

And that is....

In the JOBCARD, code COND parameter. Then, when the Job is executed , only

the Step mentioned in the RESTART parameter will get executed.

e.g., RESTART=STEP05,COND=(0,LE)

**TIP # 028**

**JCL**

We know that JOBLIB statement must be placed after the JOB statement and before the first

EXEC statement in the job.

But, the STEPLIB statement can be placed anywhere in the particular step’s JCL (not necessarily

the first DD statement in the STEP).

**TIP # 029**

**JCL**

Here is a quick question. Can Catalog Procedure have PEND

statement?

Yes! Now it can have PEND Statement.

Do check it out….

**TIP # 030**

**JCL**

How much data can TAPE store??

A typical **tape reel** might contain 170 MB whereas **tape cartridges** can contain as much as

10GB.

(Source: System 390 JCL by Gary DeWard Brown)

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**TIP # 031**

**JCL**

Do you know why null statement was introduced in JCL?

Back when punched cards were used, a null coded on distinctive colored cards was used to help

operators separate card decks. ( Hence , it helped to identify the end-of-job card, and the start of

next job for the operators)

(Source: System 390 JCL by Gary DeWard Brown)

**TIP # 032**

**JCL**

Do you know why JCL has ‘//’ in col 1& 2 in each Statement??

The Slashes date back from when **PUNCHED CARDS** were used to submit JCL code for

execution. If the cards were mistakenly put back to front in the reader, the slashes wouldn’t be

read first and so the card deck could be rejected. So ‘//’ ensures that the punched cards are placed

properly!!

(Source: System 390 JCL by Gary DeWard Brown)

**TIP # 033**

**JCL**

How can I specify dummy VSAM dataset in a JCL?

Code AMP=’AMORG’ . This parameter tells the OS to treat the file as VSAM file.

//NOVSAMIO DD DUMMY,AMP=’AMORG’

**TIP # 034**

**JCL**

I can specify the max limit of TIME parameter as

TIME=NOLIMIT or

TIME=MAXIMUM.

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Now which specification gives maximum time for a JOB?

TIME=MAXIMUM will allow the job to run for 357912 minutes (248.55 days)

TIME=NOLIMIT will allow the job for *unlimited amount of time*

Another advantage of NOLIMIT option is that it can remain in wait status for more than the installation

time limit.

**TIP # 035**

**JCL**

I want to delete a member in a PDS, but someone is using it. How can I delete it?

One can use the following JCL

//DELMEMB EXEC PGM=IDCAMS

//SYSPRINT DD SYSOUT=\*

//PDS DD DSN=libraryname,DISP=SHR

//SYSIN DD \*

ALLOC DDN(INFILE) SHR REUSE DSN('libraryname')

DELETE libraryname(membername) FILE(PDS)

**TIP # 036**

**JCL**

&SYSUID is a "system symbol" for which the system substitutes your TSO ID.

It is the only system symbol that can be used in a batch job, and can be useful when more than one

individual submits the same JCL.

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**TIP # 037**

**JCL**

I am overriding 2 DD statements in a PROC from my JCL. The first DD statement is in step 10 and

second DD statement is in step 40.

Usually , I specify as

//PS010.INPUT DD DSN=MYID.DATASET

//PS040.SYSIN DD DSN= MYID.NEW.DATASET

What will happen if I specify step 40 first and step 10 next?

zOS JCL will process it! It will override irrespective of the order it is specified. Formerly out-of-order DD

overrides were ignored.

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***COBOL***

**TIP # 038**

**COBOL**

If you are accessing ESDS VSAM file, then in COBOL do you know

that SELECT clause has something different about it!!

For ESDS,

SELECT FILE ASSIGN TO AS-DDNAME

Y

es, the DDNAMEs should be prefixed with AS- .

If you are not doing that then an S213 ABEND might occur when

attempting to open data set.

**TIP # 039**

**COBOL**

When writing a COBOL program that is to be used as a CICS application program,do not use the

compiler option DYNAM.

**TIP # 040**

**COBOL**

MERGE statement can have OUTPUT PROCEDURE but not INPUT PROCEDURE !!

**TIP # 041**

**COBOL**

Do you know how COBOL Compiler finds a dataset as VSAM dataset?

When the **ORGANIZATION** clause is coded for a file, the COBOL compiler interprets it as a

VSAM dataset. Hence, the ORGANIZATION clause should not be coded with a non-VSAM

dataset.

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**TIP # 042**

**COBOL**

Do you know using an **odd** number of digits for PACKED DECIMAL (**COMP-3**) is 5% to 20%

faster than using an **even** number of digits !!

**TIP # 043**

**COBOL**

Performance considerations for **indexes vs subscripts**:

using COMP to address a table is 30% slower than using indexes!

using COMP-3 to address a table is 300% slower than using indexes !!

using DISPLAY data items to address a table is 450% slower than using indexes !!!

**(source:** Cobol performance tuning manual)

**TIP # 044**

**COBOL**

**Rule of the THUMB:**

For a table with less than 50 entries ==> go for SEARCH ( Sequential Search)

greater than 50 entries ==> go for SEARCH ALL ( Binary Search)

**TIP # 045**

**COBOL**

In CO BO L, why we READ **FILE** but W RITE **RECO RD**?

You READ a FI LE because you don’t know in advance:

1.whether there actually is a RECORD to read or not

2. For var iable or undefined length files, how long the next RECORD will be,

if there is one.

You Wr ite a RECORD because you know in advance the answers to both of

the above ques tions .

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**TIP # 046**

**COBOL**

Using OPEN OUTPUT to load a VSAM file will significantly improve the performance of your

program. Using OPEN I-O or OPEN EXTEND will have a negative impact on your program's

performance.

**TIP # 047**

**COBOL**

Avoid repetitive uses of the INITIALIZE statement.

INITIALIZE once and move it to a second like sized 01 level, then move the second 01 level to

the first to initialize the fields.

**TIP # 048**

**COBOL**

Consider using an in-line PERFORM instead of a SEARCH when you have *less than 20*

elements in a table.

**TIP # 049**

**COBOL**

One can generate a complete listing of compiler diagnostic messages, with their explanations, by

compiling a program with the program-id of ERRMSG specified in the PROGRAM-ID

paragraph.

EX:

IDENTIFICATION DIVISION

PROGRAM-ID.ERRMSG.

ENVIRONMENT DIVISION.

DATA DIVISION.

PROCEDURE DIVISION.

STOP RUN.

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**TIP # 050**

**COBOL**

For KSDS or RRDS , when DELETE statement is used, the file must be

opened in I-O Mode.

**TIP # 051**

**COBOL**

**Performance Tuning**

Taking constant expressions out of a loop speeds up a program with no ill effects.

Example

Move zero to total.

Perform varying I from 1 by 1 until I > 100

Compute total = total + item (i) \* discount

End-perform

**Remove multiply from loop**

Move zero to total

Perform varying I from 1 by 1 until I > 100

Compute total = total + item (i)

End-perform

Compute total = total \* discount

**TIP # 052**

**COBOL**

Sometimes my initialization doesn’t work when I use INTIALIZE verb? Is there anything that I should take

care of?

When we use **INITIALIZE** verb to initialize group verbs, group elements which are **FILLER**s will

not be initialized!

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**TIP # 053**

**COBOL**

I am using internal sort in my COBOL Program. Is there anyway to test the return code of sort

operation?

The return-code or completion code is stored in a SORT-RETURN special register.

If SORT-RETURN = 0 (successful completion of SORT/MERGE)

If SORT-RETURN = 16 (Unsuccessful completion of SORT/MERGE)

**TIP # 054**

**COBOL**

In general, it is advantage to use COMP for numeric data and COMP-3 for decimal data.

**TIP # 055**

**COBOL**

Here is one better way of INITIALIZATION of a record or group item.

INTIALIZE WS-RECORD

REPLACING ALPHANUMERIC DATA BY SPACES

NUMERIC DATA BY ZEROES.

**TIP # 056**

**COBOL**

SEARCH ALL condition only test an equal condition.

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**TIP # 057**

**COBOL**

In COBOL SELECT clause, I see sometimes see ASSIGN coded like this…

SELECT INFILE ASSIGN TO **UT-S-INFILE**

OR

SELECT INFILE ASSIGN TO **DA-S-INFILE**

What they mean actually…

**First part in DDNAME: -** Device Class

UT stands for Utility (Tape or Sequential Disk)

DA stands for Direct-Access (disk)

**Second part in DDNAME: -** Method of Organization

S – Sequential (Printer, terminal, disk or tape)

I, R, D – Disk files to be accessed randomly

**TIP # 058**

**COBOL**

When using INPUT /OUTPUT PROCEDURE with SORT

We RELEASE *record-name* (for INPUT PROCEDURE) and

We RETURN *file-name* (for OUTPUT PROCEDURE)

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***VSAM***

**TIP # 059**

**VSAM**

**Performance Tuning**

One can speed up applications greatly by using memory to cut I/O when dealing with VSAM

datasets.

For this VSAM Buffers can be enlarged.

In the DD statement code AMP parameters = BUFNI(index), BUFND(data), BUFSP ( amount of

virtual storage)

Increase number of Data buffers (BUFND) for sequential access

Increase number of Index buffers (BUFNI) for random access

**TIP # 060**

**VSAM**

IDCAMS Utility can't be executed without 2 DD Statements.

They are SYSPRINT and SYSIN.

**TIP # 061**

**VSAM**

We know that FREESPACE(100,100) specification causes one record to be written for each

Control interval, and one Control Interval would be written for each control area. But do you

know why?

VSAM will always load the first record *before* taking FREESPACE option into consideration!!!

**TIP # 062**

**VSAM**

**DEFINE PATH** command creates *an alias* for the VSAM base cluster

**DEFINE ALIAS** command creates *an alias* for non-VSAM datasets

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**TIP # 063**

**VSAM**

CICS, DB2, IMS *can process* records in existing VSAM datasets but *can't create* the dataset.

Even you *can process* VSAM data sets in COBOL programs only

afte*r you create* them with access method services.

**TIP # 064**

**VSAM**

How can I specify dummy VSAM dataset in a JCL?

Code AMP=’AMORG’ . This parameter tells the OS to treat the file as VSAM file.

//NOVSAMIO DD DUMMY,AMP=’AMORG’

**TIP # 065**

**VSAM**

I want to process a KSDS thru an alternate key. Now what are the **5** IDCAMS commands that must be

executed before the records in a KSDS can be processed thru an alternate key?

1. DEFINE CLUSTER

2. REPRO (the base cluster must be non-empty KSDS)

3. DEFINE ALTERNATEINDEX

4. DEFINE PATH

5. BLDINDEX

The first 3 IDCAMS commands should be executed in the above-mentioned order.

The last 2 IDCAMS can be done in any order.

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**TIP # 066**

**VSAM**

I want to make my VSAM dataset read-only. How can I do it?

By using **INHIBIT** along with **ALTER** command

e.g.,

//STEP1 EXEC PGM=IDCAMS

//SYSPRINT DD SYSOUT=\*

//SYSIN DD \*

ALTER -

SECRET.KSDS.DATA -

INHIBIT

ALTER -

SECRET.KSDS.INDEX -

INHIBIT

/\*

//

Notice that the ALTER command is used with DATA and INDEX and not with the cluster.

**TIP # 067**

**VSAM**

VSAM equivalent of temp dataset is to create VSAM file with REUSE option. A dataset created with

REUSE can be treated as a new dataset at any subsequent time.

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**TIP # 068**

**VSAM**

How should be VSAM file defined in order that it can be accessed both in CICS and in BATCH

environment?

Define as SHAREOPTION (2,3)

**TIP # 069**

**VSAM**

While designing VSAM files, what’s the best way to choose Control Interval (CI) size for the data and the

index?

Well, it depends on whether the data will be accessed directly or sequentially.

For Direct access use small CI

For Sequential access use Lager CI

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***FILEAID***

**TIP # 070**

**FILEAID**

The Easiest and Coolest way to locate bad data is thru File-Aid's FIND command.

1.OPEN the file in FILE-AID (in either browse or edit mode)

2.XREF with COPYBOOK.

3.Use FMT mode

4.Then issue ,

F /field-name INVALID

or

F /field-number INVALID

The control will take you to the first invalid data record for the given field.

e.g.,

The FILE has 3 fields namely NAME,AGE,COUNTRY.

If you want to find the invalid data in the age field, then issue

F /2 INVALID

**TIP # 071**

**FILEAID**

We always face a s ituation such that when we have opened a File in FI LEAID

Browse mode but later wished it was EDIT Mode and vice ver sa. So in

this situation, what we do is come out of the browse mode and again open in

edit mode and vice ver sa. But there is a cool command available in FI LE-AID

to help us in this type of s ituation.

I f u r in Browse Mode and want to change it into EDIT Mode , in the Line

Command is sue

COMMAND ==> GO EDIT

If u r in EDIT Mode and want to change it into BROWSE Mode , in the Line

Command is sue

COMMAND ==> GO BROWSE

100 COOL MAI NFRAME T I PS

**TIP # 072**

**FILEAID**

How to determine compile date of loadlib member ??

Use FILE-AID !!

1. Go to FILE-AID 3.1 option

2. In the Library Utility type in the *loadlib dataset name*

3. Type 'a' next to the member name

4. TDATE is compile date

**TIP # 073**

**FILEAID**

Whats the best way to count the number of records in a VSAM File?

1.Choose FILE-AID Option 3.8

2. At the prompt of ....ENTER NEXT FUNCTION OR END , enter TALLY

3. U will get the record count

4. Type END to exit.

**TIP # 074**

**FILEAID**

While working in MS Excel we have the option of “freeze Panes”. By this options we can freeze

some columns and have other columns scrolling. This feature is helpful in analysis when there

are lots of columns(fields) in a file.

In mainframe too, we have similar such facility thru File-Aid.

1.Open the file in File-Aid

2. use VFMT format

3. If you want to freeze columns(fields) 1,2,3, and 6 and have the rest as scrollable

issue command **HOLD 1-3,6**

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**TIP # 075**

**FILEAID**

Can I issue FIND command to find values that are less than or greater than ‘certain value’ at

column 25??

We can’t accomplish this task thru ISPF , but File -Aid provides us the facility to issue FIND

command with relational operators like EQ,NE,LT,GT,LE and GE.

e.g.,

FIND LT ‘2004’ 25 ALL

So if one wants to use relational operator along with FIND command, open the same dataset in

FILE-AID.

**TIP # 076**

**FILEAID**

Consider this situation. I am doing a verification on an output file. The output file has 200 fields.

I need to verify only 25th and 175th fields only.

I am using FILE-AID’s VFMT mode and for each record I am scrolling between 25 th and 175th

field. Is there any efficient way to handle this situation?

Some people might use HOLD to freeze 25th and 175th field , but still other fields are displayed ,

which is an annoyance.

Here is one better way:

In the VFMT mode, issue DISPLAY 25 175 ONLY

Only 25th and 175th fields will be displayed.

**TIP # 077**

**FILEAID**

**ABEND SOLVING**

At midnight I receive production call.

One job abended due to classic S0C7. Thru analysis I located the particular field which is a

COMP-3 and junk data is sitting in that field for some records.These bad records are not

contiguous but occuring randomly in the input file.

Now to save my head I have to delete all the records with bad data in that particular field and reexecute

the job quickly. Assume that input file has some 10 million records. How can I eliminate

the bad records in an efficient and a fast method?

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Here is the approach:

Using the following FILE-AID option in batch mode

**$$DD01 DROP IF=(field-position, field-length, NEP)**

**NEP** *means* **Not Equal to PACK**

One can generalize and customize the below JCL to deal with similar type of ABENDS.

**For Example,**

My input layout is:

01 TEST-RECORD.

05 NAME-FIELD PIC X(5).

05 AMOUNT-FIELD PIC 9(3) COMP-3.

**My JCL to eliminate the bad records:**

//STEP01 EXEC PGM=FILEAID

//\*

//SYSUDUMP DD SYSOUT=\*

//SYSPRINT DD SYSOUT=\*

//SYSLIST DD SYSOUT=\*

//SYSTOTAL DD SYSOUT=\*

//DD01 DD DSN=MYID.CHECK.OUT,DISP=SHR

//DD01O DD DSN=MYID.CHECK.OUT,

// DISP=(NEW,CATLG,CATLG),

// DCB=(MYID.CHECK.OUT)

//SYSIN DD \*

$$DD01 DROP IF=(6,2,NEP)

/\*

This will drop the bad data records and retain only the good one.

**TIP # 078**

**FILEAID**

I want to do Fuzzy Comparison of files!!

My requirement is to compare 2 files of which for one certain field I can have + or - 1 value which should

be acceptable while comparing.

Thru FILE-AID COMPARE (OPTION 10), one can set percentage amount for numeric

fields that determines "close enough" matches. When the "Formatted Criteria" table

appears after the 2 files are specified, use the "T" line command. This brings up a

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"Tolerance Value/Percentage Specification" panel where you can set a plus or minus

value for a numeric field.

***SORT***

**TIP # 079w**

**SORT**

Do you know COBOL Internal SORT and MERGE is *actually done* by DFSORT ?!!

If you SORT or MERGE with COBOL, **the compiler** automatically generates a SORT or

MERGE control statement for you with the correct DFSORT descriptions for the COBOL fields

you specify.

**TIP # 080**

**SORT**

How can I replace all the low-values in a file to spaces??

Use ALTSEQ CODE .

Here's an example of how you could change all low values (X'00') to spaces (X'40'), in an FB

data set with an LRECL of 80:

ALTSEQ CODE=(0040)

OUTREC FIELDS=(1,80,TRAN=ALTSEQ)

(Source: IBM SORT website)

100 COOL MAI NFRAME T I PS

**TIP # 081**

**SORT**

**SYNCSORT**

My Production job is such that, on one of the steps it has to

copy a VSAM dataset to flat file, and then process that flat

file in the subsequent steps. Sometimes the input VSAM may be

empty. When its empty, my job abends. How can I prevent the job

from abending when the VSAM is empty ?

Pass the parameter, VSAMEMT=YES for the SORT utility.

i.e,

//STEP3 EXEC PGM=SORT,PARM=’VSAMEMT=YES’

//\*

//SYSOUT DD SYSOUT=\*

//SORTIN DD DSN=VSAM.DSN

// DISP=SHR

//SORTOUT DD DSN=FLATFILE.DSN

// DISP=SHR

//SYSIN DD \*

SORT FIELDS=COPY

/\*

***SDSF***

**TIP # 082**

**SDSF**

If you want to rearrange the columns in SDSF -

1.Go TO SDSF.

2.In command line type "arr ?".

3.This will bring the complete list of SDSF column names.

4.You can move the columns using "/" and "//".

One Column in the SDSF that we can bring to the front position is the MAX-RC (which usual is

the last column in SDSF ) which shows the completion code or the abend code of the job.

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**TIP # 083**

**SDSF**

How to allow another user to browse my job?

Usually if we want other user to see our job, we supply them with jobname and jobid.

They use, OWNER urid and PRE urid\* to browse your job.

One simple way to allow another user to browse is to change the DEST column in either the H /I

or ST panel of the particular job to the another user id(who wants to view it).

The Other user need not issue commands or change panels to view your job. It will be available

in his Hold/Output panel itself.

**TIP # 084**

**SDSF**

I have some 50 jobs in my SPOOL. I want to list only the jobs that are ABENDED.

For such a kind of listing, use the primary command **FILTER** on the command line as given in

the examples below

FIL MAX AB\* - shows jobs that has ABENDS

Other Examples are:

FIL MAX ‘JCL ERROR’ - shows jobs that has JCL errors

FIL MAX NE ‘RC 0000’ - shows jobs with “exceptional conditions”

FIL MAX EQ ‘RC 0000’ - shows successfully completed jobs

If you want to switch off the filter, then issue FIL OFF

**TIP # 085**

**SDSF**

For selecting jobs in the SDSF queue , I either use "?" or "S".

When I use "?" , I get the break-up output groups for example like

JESMSGLG,JESJCL,JESYSMSG,SYSPRINT,SYSUT2 etc.

When I use "S" , the entire job is selected without this break-up.

Is there any command to navigate to view each output group when I use "S" to select the job?

After opening the job using "S", use "N" (next) or "P"(Previous) to navigate between different

output groups.

100 COOL MAI NFRAME T I PS

***CICS***

**TIP # 086**

**CICS**

Use CALLs instead of LINKs in CICS

**EXEC CICS LINK**

- establishes a new run unit

- sets up environment

- Does CICS table-search

- For all this activities, it executes 1400 machine code instructions

**CALL**

- It executes around 12 machine code instructions

Just *replacing* EXEC CICS LINK with CALL statement on a case study, it was found that

Internal Transaction Response time improved 23 - 78 %

Total CPU Time improved 15 - 23 %

Dynamic storage use improved 11 - 30 %

\* CALL used in the study is STATIC CALL . COBOL refered here is VS COBOL II

**TIP # 087**

**CICS**

You can use a COBOL CALL statement to call ***only*** a VS COBOL II or an Assembler language

program in the **same** load module as the calling program.

For calls to programs written in languages other than VS COBOL II, including other versions of

COBOL, you need to use the commands EXEC CICS LINK or EXEC CICS XCTL.

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**TIP # 088**

**CICS**

Do you know how CICS was called initially ??

PUCICS!!!

PUCICS *stands for* Public Utilities Customer Information Control System.

After couple of years, it took the name CICS.

**TIP # 089**

**CICS**

What is the difference between getting the system time with EIBTIME and ASKTIME

command?

ASKTIME = requests the current date and time

EIBTIME = field have the value at the task initiation time

**TIP # 090**

**CICS**

To access the system values like date, time, Userid etc and store in a variable, one can use

EXEC CICS ASSIGN

**TIP # 091**

**CICS**

While doing a mass delete records from VSAM file using a generic key, how can you determine the number of records

deleted?

By using the **NUMREC(data-area)** option with the generic key. Upon completion of the delete

the data-area will contain the number of records that are deleted.

100 COOL MAI NFRAME T I PS

**TIP # 092**

**CICS**

When generating Mapset, specify **TIOAPX=YES** for COBOL programs. YES generates a 12-

byte FILLER item at the beginning of each symbolic map. It should always be specified for

COBOL programs.

***DB2***

**TIP # 093**

**DB2**

Use the OS/390 – MVS solution ‘Move current-date to ……’ to obtain a date or

to do a date calculation instead of DB2’s ‘SET CURRENT TIMESTAMP’.

EXEC SQL

SET :WS-CURR-TS = CURRENT\_TIMESTAMP

END-EXEC

SELECT CURRENT\_TIMESTAMP, VARCHAR\_FORMAT(CURRENT\_TIMESTAMP,’YYYYMMDD’)

FROM SYSIBM.SYSDUMMY1;

**TIP # 094**

**DB2**

Avoid joins that involve more than two TABLES. Break it up into multiple SQL statements.

In a case study, a 5-table join used 4190 CPU hours in a month for a weekly process.

Breaking it up dropped the usage to 9 CPU hours per month!!

**TIP # 095**

**DB2**

If using CURSOR SQL for read only, use FOR FETCH ONLY in the SQL.

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**TIP # 096**

**DB2**

How To Match Contoken Across Loadlib & Dbrmlib

Step 1.

Go to SYSIBM.SYSPACKAGE for that program - look at the latest bind -

you can look at the time stamp column to find the latest. There will be a

column called CONTOKEN. This will have a value.

Ex -

-+---------+---------+---------+---------+---------+---------+---------+----

COLLID NAME CONTOKEN OWNER CREATOR TIMESTAMP

-

+---------+---------+---------+---------+---------+---------+---------+----

CBPR39WO PGMNAME .îÒ#.¹". DFDBS ABC 2004-04-21-06.42.00.

Step 2 .

Covert the CONTOKEN to zoned decimal format. From the above example it

is X'1756ed7b02da7f32'. You can use HEX on to find the ZD format.

Step 3.

Go to the DBRMLIB - Search for this String like - F x'1756ed7b02da7f32'

. If it is the correct DBRM lib using which it is bound then you will find a

match.

Also you can get the DBRMLIB used for binding from the above Query o/p

also if you scroll towards the end. There is a Column for that also.

Now How to match it to load lib .

Step 4.

Go to your load lib in browse mode. Search for the First 8 bytes in the

above ZD format of the CONTOKEN

Like =-- F '1756ed7b'. If you find a match then it is your matching

load !!!

The twist here is - on the SYSIBM.SYSPACKAGE and The DBRMLIB the

contoken is stored in the Same format, But in the Loadlib the date & time part of

the CONTOKEN is swapped and stored. This is why you need to search for the

8 bytes separately. Otherwise you need to swap the 16 bytes of the

CONTOKEN and search.

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**TIP # 097**

**DB2**

To get only the first n rows

select \*

from table name

**fetch first n rows only**

with ur;

**TIP # 098**

**DB2**

**Performance Tuning**

Use JOIN instead of Sub-Queries

SELECT EMPNO, LASTNAME FROM EMP, DEPT

WHERE WORKDEPT =DEPTNO

AND DEPTNAME = ‘PLANNING’

SELECT EMPNO, LASTNAME FROM EMP

WHERE WORKDEPT IN

( SELECT DEPTNO FROM DEPT

WHERE DEPTNAME = ‘PLANNING’ )

**TIP # 099**

**DB2**

How to select the duplicate rows from a table?

SELECT columns

FROM table

GROUP BY columns

HAVING COUNT(\*) > 1

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**TIP # 100**

**DB2**

For SQL declaration of DECIMAL(n,m),

the COBOL equivalent generated is PIC S9(n-m)v9(m) COMP-3