



**USING
IPCS
TO SOLVE
CICS
STORAGE
VIOLATIONS**



INTRODUCTION TO IPCS

IPCS can operate in one of three modes :

- TSO terminal line mode
- TSO full screen mode using the services of ISPF Dialog Manager
- Batch mode using TSO IKJEFT01



INTRODUCTION TO IPCS

IPCS can operate in one of three ways. A TSO terminal in line mode. A TSO terminal in full screen mode using the services of ISPF Dialog Manager, or batch mode using TSO IKJEFT01.

```
//P01CEPP JOB (ACCT#),  
//          'IPCS BATCH PRINT',  
//          CLASS=A,  
//          MSGLEVEL=(1,1),  
//          MSGCLASS=X,  
//          NOTIFY=P01CEP  
//IPCS EXEC PGM=IKJEFT01,REGION=4M  
//DFHSDUMP DD DSN=SYS1.CICSTS52.DUMP03,DISP=SHR  
//DFHSNAP DD SYSOUT=*  
//IPCSDDIR DD DSN=P01CEP.DDIR,DISP=SHR  
//IPCSTOC DD SYSOUT=*  
//IPCSPRNT DD SYSOUT=*  
//SYSPROC DD DSN=SYS1.SBLSCLI0,DISP=SHR  
//SYSTSPRT DD SYSOUT=*  
//SYSTSIN DD *  
    IPCS NOPARM  
    DROPDUMP DD(DFHSDUMP)  
    PROFILE PAGESIZE(50)  
    SETDEF DD(DFHSDUMP) NOPROBLEM NOCONFIRM NOTERMINAL PRINT LIST  
    VERBEXIT DFHPD690 'DS=3,KE=3,XM=3'  
    STATUS SYSTEM  
    END  
/*
```



USING IPCS

This is the primary option menu

```
----- IPCS PRIMARY OPTION MENU -----
OPTION  ==>

      0  DEFAULTS   - Specify default dump and options
      1  BROWSE     - Browse dump data set
      2  ANALYSIS   - Analyze dump contents
      3  UTILITY    - Perform utility functions
      4  INVENTORY  - Inventory of problem data
      5  SUBMIT     - Submit problem analysis job to batch
      6  COMMAND    - Enter subcommand, CLIST or REXX exec
      T  TUTORIAL   - Learn how to use the IPCS dialog
      X  EXIT       - Terminate using log and list defaults

*****
* USERID   - P01CEP
* DATE     - 19/01/18
* JULIAN   - 11.329
* TIME     - 15:29
* PREFIX   - P01CEP
* TERMINAL- 3278
* PF KEYS  - 12
*****
```

Enter END command to terminate IPCS dialog



USING IPCS

----- IPCS Default Values -----

Command ==>

You may change any of the defaults listed below. The defaults shown before any changes are LOCAL. Change scope to GLOBAL to display global defaults.

Scope ==> **LOCAL** (LOCAL, GLOBAL, or BOTH)

If you change the Source default, IPCS will display the current default Address Space for the new source and will ignore any data entered in the Address Space field.

Source ==> **DSNAME('SYS1.RSMA.DMP00032')**

Address Space ==> **ASID(X'005C')**

Message Routing ==> **NOPRINT TERMINAL**

Message Control ==> **CONFIRM VERIFY FLAG(WARNING)**

Display Content ==> **NOMACHINE REMARK REQUEST NOSTORAGE SYMBOL**

Press ENTER to update defaults.

Use the END command to exit without an update.



----- IPCS Default Values -----

Command ==>

You may change any of the defaults listed below. The defaults shown before any changes are LOCAL. Change scope to GLOBAL to display global defaults.

Scope ==> **LOCAL** (LOCAL, GLOBAL, or BOTH)

Local defaults. These values are currently in use for an ISPF screen in the IPCS dialog, for a batch IPCS session, or for an IPCS interactive line-mode session.

Global defaults. These values are used to establish the local defaults when IPCS processing starts in an ISPF screen, a batch IPCS session, or an IPCS interactive line-mode session

The global defaults are obtained from the dump directory being used. IPCS uses as the global defaults the following, in this order:

1. The last value specified as a global default in a SETDEF subcommand or on the IPCS Default Values panel in the IPCS dialog.

USING IPCS

----- IPCS - ENTRY PANEL -----

Command ==>

CURRENT DEFAULTS:

Source ==> **DSNAME('SYS1.RSMA.DMP00032')**

Address space ==> **ASID(X'005C')**

OVERRIDE DEFAULTS:

(defaults used for blank fields)

Source ==> **DSNAME('SYS1.RSMA.DMP00032')**

Address space ==>

Password ==>

POINTER:

Address ==>

(blank to display pointer stack)

Remark ==>

(optional text)



USING IPCS

```
BLS18122I Initialization in progress for  
      DSNAME('SYS1.RSMA.DMP00032')
```

```
BLS18124I
```

```
      TITLE=COMPID=DF122,CSECT=IGWLNL34+48D8,DATE=01/19/18,MAINTID=UA  
      44807
```

```
,ABND=0F4,RC=00000024,RSN=66843402
```

```
BLS18223I Dump written by z/OS 02.02.00 SVC dump - level same as  
      IPCS level
```

```
BLS18222I z/Architecture mode system
```

```
BLS18160D May summary dump data be used by dump access? Enter Y  
      to use, N to bypass.
```

```
y
```

```
BLS18123I 327,744 blocks, 1,363,415,040 bytes, in  
      DSNAME('SYS1.RSMA.DMP00032')
```

```
IKJ56650I TIME-01:46:44 PM. CPU-00:00:03 SERVICE-227251 SESSION-  
      01:43:34 January 19,2018
```

```
BLS18224I Dump of z/OS 02.02.00 - level same as IPCS level
```

```
***
```



USING IPCS

This is the Pointers screen

```
DSNAME('SYS1.RSMA.DMP00032') POINTERS -----  
Command ==>                                     SCROLL ==> CSR  
ASID(X'005C') is the default address space  
PTR   Address           Address space           Data type  
00001 7000.             ASID(X'005C')             AREA  
      Remarks: Kernel Anchor Block  
  
***** END OF POINTER STACK *****
```



USING IPCS

IPCS Complete Dump

```
IP LIST E0. BLOCK(0) L(16)
```

Result

```
LIST E0. BLOCK(0) LENGTH(X'10') AREA
```

```
E0. LENGTH(X'10')==>All bytes contain X'00'
```



CICS IPCS VERBEXIT

The **VERBEXIT** or **VERBX** command is used to invoke the IPCS routines

The commands can be specified with a level number

- Level 0 Formats no data.
- Level 1 Formats only summary reports
- Level 2 Formats all control blocks for the specified component.
- Level 3 Formats both summary and control blocks for the specified components



CICS IPCS VERBEXIT

----- IPCS Subcommand Entry -----

Enter a free-form IPCS subcommand or a CLIST or REXX exec invocation below:

===>

----- IPCS Subcommands and Abbreviations -----

ADDDUMP	DROPDUMP, DROPD	LISTMAP, LMAP	RUNCHAIN, RUNC
ANALYZE	DROPMAP, DROPM	LISTSYM, LSYM	SCAN
ARCHECK	DROPSYM, DROPS	LISTUCB, LISTU	SELECT
ASCBEXIT, ASCBX	EQUATE, EQU, EQ	LITERAL	SETDEF, SETD
ASMCHECK, ASMK	FIND, F	LPAMAP	STACK
CBFORMAT, CBF	FINDMOD, FMOD	MERGE	STATUS, ST
CBSTAT	FINDUCB, FINDU	NAME	SUMMARY, SUMM
CLOSE	GTFTRACE, GTF	NAMETOKN	SYSTRACE
COPYDDIR	INTEGER	NOTE, N	TCBEXIT, TCBX
COPYDUMP	IPCS HELP, H	OPEN	VERBEXIT, VERBX
COPYTRC	LIST, L	PROFILE, PROF	WHERE, W
CTRACE	LISTDUMP, LDMP	RENUM, REN	



CICS IPCS VERBEXIT

----- IPCS Subcommand Entry -----

Enter a free-form IPCS subcommand or a CLIST or REXX exec invocation below:

==> VERBX DFHPD680 'KE=3,DS=3,XM=3,TR=3'

----- IPCS Subcommands and Abbreviations -----

ADDDUMP	DROPDUMP, DROPD	LISTMAP, LMAP	RUNCHAIN, RUNC
ANALYZE	DROPMAP, DROPM	LISTSYM, LSYM	SCAN
ARCHECK	DROPSYM, DROPS	LISTUCB, LISTU	SELECT
ASCBEXIT, ASCBX	EQUATE, EQU, EQ	LITERAL	SETDEF, SETD
ASMCHECK, ASMK	FIND, F	LPAMAP	STACK
CBFORMAT, CBF	FINDMOD, FMOD	MERGE	STATUS, ST
CBSTAT	FINDUCB, FINDU	NAME	SUMMARY, SUMM
CLOSE	GTFTRACE, GTF	NAMETOKN	SYSTRACE
COPYDDIR	INTEGER	NOTE, N	TCBEXIT, TCBX
COPYDUMP	IPCS HELP, H	OPEN	VERBEXIT, VERBX
COPYTRC	LIST, L	PROFILE, PROF	WHERE, W
CTRACE	LISTDUMP, LDMP	RENUM, REN	



CICS IPCS VERBEXIT

<u>Keyword</u>	<u>Levels</u>	<u>Functional Area</u>
AI	=0 2	Autoinstall Model manager
AP	=0 1 2 3	Application Domain
AU	=0 2	CICS Affinity Utility
BA	=0 1 2 3	Business Application Domain
CC	=0 2	CICS catalog Domain
CP	=0 2	The Common Programming Interface
CSA	=0 2	CICS common system area
DB2	=0 1 2 3	The CICS/DB2 Interface
DD	=0 1 2	Directory manager Domain
DH	=0 1 2 3	Document Handler Domain
DLI	=0 2	CICS DL/I interface
DM	=0 1 2 3	Domain manager
DS	=0 1 2 3	Dispatcher Domain
DU	=0 2	Dump Domain
EJ	=0 1	The Enterprise Java Domain
EM	=0 1 2	The Event manager
FCP	=0 2	File control program
ICP	=0 2	Interval control program
II	=0 1 2	The IIOP Domain
IE	=0 1 2	The ECI over TCP/IP Domain
IND	=0 1 2 3	Indexes for control blocks
JCP	=0 2	Journal control program
KE	=0 1 2 3	Kernel Domain
LD	=0 1 2 3	Loader Domain
LG	=0 1 2 3	Log Manager Domain
LM	=0 1 2 3	Lock manager Domain
ME	=0 2	Message Domain
MN	=0 1 2 3	Monitoring Domain



CICS IPCS VERBEXIT

<u>Keyword</u>	<u>Levels</u>	<u>Functional Area</u>
MRO	=0 2	Multiregion operation
NQ	=0 1 2 3	Enqueue Manager Domain
OT	=0 1 2 3	Object Transaction Domain
PA	=0 2	Parameter Domain
PCT	=0 2	Program control table
PG	=0 1 2 3	Program manager Domain
PR	=0 2	Partner resource manager
PT	=0 1 2 3	Partner Domain
RD	=0 2	Resource Definition
RM	=0 2	Recovery Manager Domain
RX	=0 2 3	Recovery Resources Management Services Domain
RZ	=0 1 2	Requests Streams Domain
SH	=0 1 2 3	Scheduler Services Manager Domain
SJ	=0 1 2	JVM Domain
SSA	=0 2	Static storage area
SO	=0 1 2 3	Socket Domain
SM	=0 1 2 3	Storage Manager Domain
ST	=0 1 2 3	Statistics Domain
SZ	=0 1	Front-end programming interface (FEPI)
TCP	=0 1 2 3	Terminal control program
TDP	=0 2	Transient data program
TI	=0 1 2 3	Timer Domain
TMP	=0 2	Table manager Domain
TR	=0 1 2 3	Trace Domain
TRS	=<trace selection parameters>	
TSP	=0 1 2 3	Temporary storage Domain
UEH	=0 2	User exit handler
US	=0 1	User Domain
WB	=0 1 2	Web Domain
XM	=0 1 2 3	Transaction manager
XRF	=0 2	Extended recovery facility
XS	=0 2	Security Domain



CICS IPCS VERBEXIT

* * * * * CICS 6.8.0 - IPCS EXIT * * * * *

CICS680 OPERANDS:

KE=3

=== SUMMARY OF ACTIVE ADDRESS SPACES

ASID(hex): JOBNAME:

005C CICSTS51

- DFHPD0121I FORMATTING CONTROL BLOCKS FOR JOB CICSTS51

=== DUMP SUMMARY

DUMPID: 1/0013

DUMPCODE: SM0102

DATE/TIME: 24/01/18 21:54:30 (LOCAL)

MESSAGE: DFHSM0102 CICSTS51 A storage violation (code X'**0F0C**') has
been detected by module DFHSMAR.

SYMPTOMS: PIDS/5655Y0400 LVLS/680 MS/DFHSM0102 RIDS/DFHSMAR

PTFS/GM01 PRCS/00000F0C

TITLE: (None)

CALLER: (None)

ASID: X'005C'



Trace Entries

Chapter 43. Storage manager domain trace points

This table lists the storage manager (SM) domain trace points, including the trace ID, the module name, the trace level, the trace type, and the data returned by the trace point. Trace points for the storage manager domain take the form "SM xxxx"

SM 0F0C DFHSMAR Exc Storage check failure

- 1 SMAR parameter list
- 2 Address of storage element
- 3 Length of storage element
- 4 First 512-bytes (max) of storage element
- 5 Last 512-bytes (max) of storage element
- 6 Data preceding storage element (1K max)
- 7 Data following storage element (1K max).

