

IDUG

2025

# EMEA Db2 TECH CONFERENCE

Dusseldorf | October 26 - 30

Things about Db2 z/OS I wish I'd remember when.....

Michael Cotignola, BMC Software

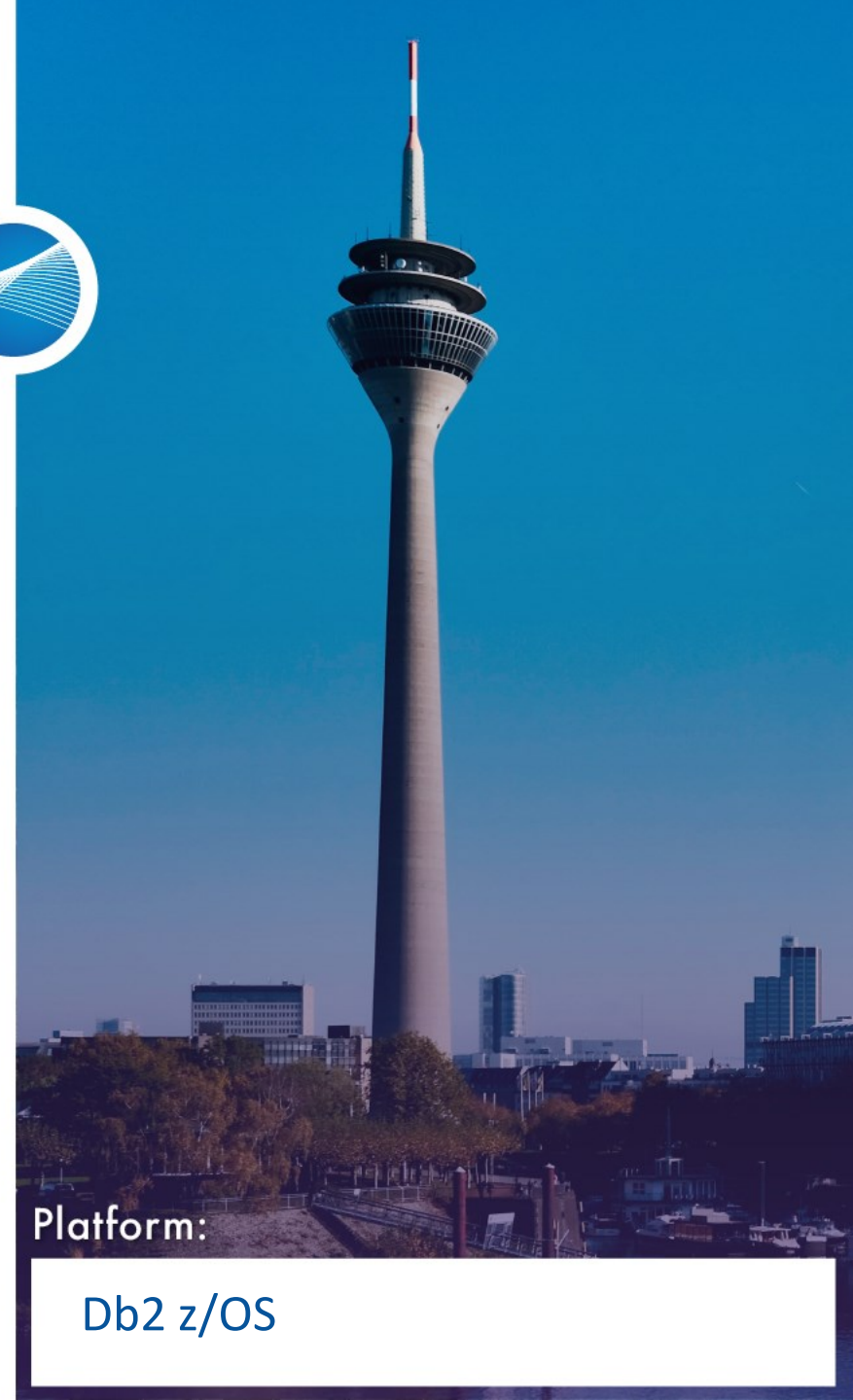
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**Session Code:**



**Platform:**

Db2 z/OS



- RTS - RUNSTATS
- BIND vs REBIND
- DSNZPARMs
- Explain Tables
- STORED PROCEDUREs
- Display Commands
- Backout Recover
- Etc...

- **Why ??**
- **Zparms**
  - **STATSINT**
  - **DISABLE\_EDMRTS ??**
  - **Feedback ??**
    - **STATFDBK\_SCOPE**
    - **STATFDBK\_PROFILE**

- RTS Scalability

- SMALLINT → INTEGER
- INTEGER → BIGINT
- LOCKMAX -1 → 0

- INDEX PAGE SPLITS

- REORGTOTALSPLITS
- REORGSPPLITTIME
- REORGEXCSPLITS

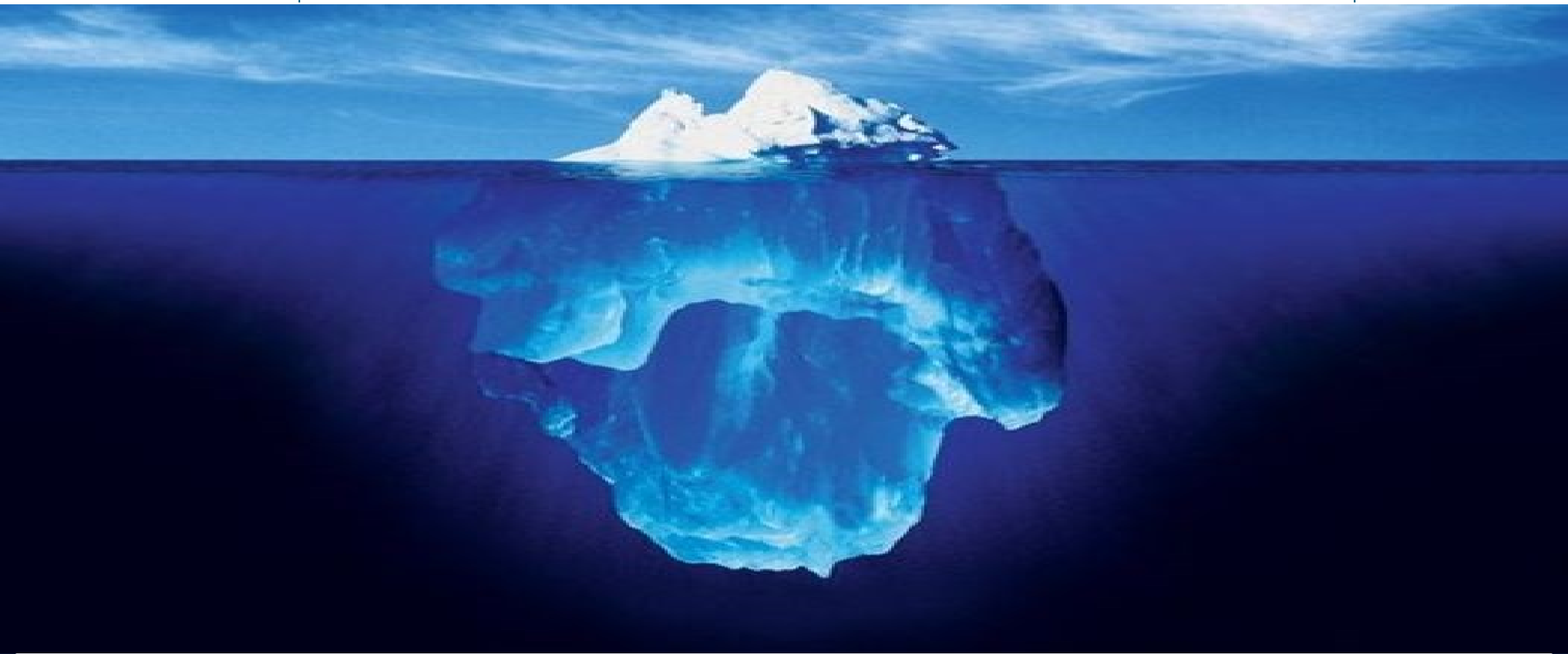
} M501

- IFCID 396
- IFCID 359

## When are these values externalized ?

- STATSINT
  - ACCESS DATABASE
  - STOP/START DATABASE/TS or Db2
- **Versioning ??**
  - ALTER TABLE SYSIBM.SYSINDEXSPACESTATS
  - ADD VERSIONING**
  - USE HISTORY TABLE SYSIBM.SYSIXSPACESTATS\_H
- **Subsystem Recovery ??**

- **DISABLE\_EDMRTS ??**
  - Db2 13 migration
  - Db2 12 FL510
    - Package used < 18 months
    - Bound < Db2 11
- **AUTO REBIND !!**



- **INVALIDATE CACHE !!!**
- **Default NO**
  - Except....
    - RUNSTATS RESET ACCESSPATH
    - RUNSTATS REPORT NO UPDATE NONE
- **Function level 505** (APAR PH09191 - June 2019)
  - STATPGSAMP
  - NO RTS updates

- What's the big deal ??
- -805 ??
- BIND vs REBIND
  - Not the same
  - When to use

- DBRM has not changed
- Db2 Upgrade/Migration
  - APPREUSE/COMPARE
- STATS, New Index, etc...

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• Where am I?

Row 1 to 15 of 34

Scroll ==> CSR

01

```
DJJ-R ----- DB2 Commands -----
Command ==>>>
Model Commands      1.  DISPLAY DATABASE(DSN8D13A)  LIMIT(9994)
                   2.  DISPLAY THREAD (*) TYPE(*) LIMIT(9994)
                   3.  DISPLAY UTILITY (*)
Current Command     . .  -DISPLAY GROUP DETAIL
```

### Command Results

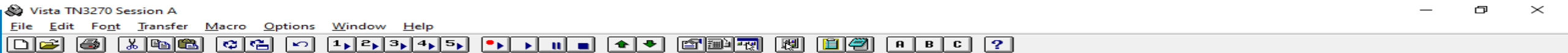
```
DSN7100I  *DJJ1 DSN7GCMD
*** BEGIN DISPLAY OF GROUP(DSNDJJ  ) CATALOG LEVEL(V13R1M504)
      CURRENT FUNCTION LEVEL(V13R1M504)
      HIGHEST ACTIVATED FUNCTION LEVEL(V13R1M504)
      HIGHEST POSSIBLE FUNCTION LEVEL(V13R1M504)
      PROTOCOL LEVEL(2)
      GROUP ATTACH NAME(DJJ  )
```



DB2 MEMBER	SUB ID	SUB SYS	CMDPREF	STATUS	DB2 LVL	SYSTEM NAME	IRLM SUBSYS	IRLMPROC
DJJ1	1	DJJ1	*DJJ1	ACTIVE	131505	BMCA	IJJ1	DJJ1IRLM
DJJ2	2	DJJ2	*DJJ2	ACTIVE	131505	BMCB	IJJ2	DJJ2IRLM



MIGRATION READINESS REPORT



DJJ1-R ----- DB2 Commands ----- Row 1 to 15 of 30  
Command ==> \_ Scroll ==> CSR 01

Model Commands 1. DISPLAY DATABASE(MXCUTIL) SPACENAM(BMCDICT) LIMIT(994)  
2. DISPLAY DATABASE(MXCUTIL) SPACENAM(BMCDICT) LIMIT(994)  
3.  
Current Command . . -DISPLAY GROUP DETAIL

----- Command Results -----  
DSN7100I \*DJJ1 DSN7GCMDBEGIN DISPLAY OF GROUP(DSNDJJ CATALOG LEVEL(V12R1M503) ←  
CURRENT FUNCTION LEVEL(V12R1M504) ←  
HIGHEST ACTIVATED FUNCTION LEVEL(V12R1M504) ←  
HIGHEST POSSIBLE FUNCTION LEVEL(V12R1M504) ←  
PROTOCOL LEVEL(2)  
GROUP ATTACH NAME(DJJ )

DB2 MEMBER	ID	SUB SYS	CMDPREF	STATUS	DB2 LVL	SYSTEM NAME	IRLM SUBSYS	IRLMPROC
DJJ1	1	DJJ1	*DJJ1	ACTIVE	121510	BMCA	IJJ1	DJJ1IRLM
DJJ2	2	DJJ2	*DJJ2	ACTIVE	121510	BMCB	IJJ2	DJJ2IRLM

DB2 PARALLEL PARALLEL

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```
DSN7100I *DIA1 DSN7GCMO
*** BEGIN DISPLAY OF GROUP(DSNDIA ) CATALOG LEVEL(V12R1M500)
      CURRENT FUNCTION LEVEL(V12R1M500)
      HIGHEST ACTIVATED FUNCTION LEVEL(V12R1M500)
      HIGHEST POSSIBLE FUNCTION LEVEL(V12R1M501)
      PROTOCOL LEVEL(2)
      GROUP ATTACH NAME(DIA )
```

```
-----
DB2      SUB      DB2      SYSTEM      IRLM
MEMBER   ID      SYS      CMDPREF     STATUS     LVL      NAME      SUBSYS     IRLMPROC
-----
DIA1     1      DIA1    *DIA1      ACTIVE     121510  BMCA     IIA1      DIA1IRLM
DIA2     2      DIA2    *DIA2      ACTIVE     121510  BMCB     IIA2      DIA2IRLM
-----
```

### MIGRATION READINESS REPORT

```
-----
DB2      CODE      SPE      MIGRATION
MEMBER   LEVEL     APAR     ELIGIBLE
-----
DIA1     V12R1M510 PH37108  YES
DIA2     V12R1M510 PH37108  YES
MIGRATION READINESS STATUS: GROUP IS NOT READY FOR DB2 13
REASON: HIGHEST ACTIVATED FUNCTION LEVEL NOT V12R1M510
```

\*\*\*

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----- DB2 Commands ----- Row 1 to 15 of 34

Command ==> Scroll ==> CSR

Model Commands 1. DISPLAY DATABASE(MXCUTIL) SPACENAM(BMCDICT) LIMIT(994)  
2. DISPLAY DATABASE(MXCUTIL) SPACENAM(BMCDICT) LIMIT(994)  
3.  
Current Command . . -DISPLAY GROUP DETAIL

----- Command Results -----

DSN7100I \*DJJ1 DSN7GCMD  
\*\*\* BEGIN DISPLAY OF GROUP(DSNDJJ ) CATALOG LEVEL(V13R1M501)  
CURRENT FUNCTION LEVEL(V13R1M501)  
HIGHEST ACTIVATED FUNCTION LEVEL(V13R1M501)  
HIGHEST POSSIBLE FUNCTION LEVEL(V13R1M503)  
PROTOCOL LEVEL(2)  
GROUP ATTACH NAME(DJJ )

DB2 MEMBER	ID	SUB SYS	CMDPREF	STATUS	DB2 LVL	SYSTEM NAME	IRLM SUBSYS	IRLMPROC
DJJ1	1	DJJ1	*DJJ1	ACTIVE	131503	BMCA	IJJ1	DJJ1IRLM
DJJ2	2	DJJ2	*DJJ2	ACTIVE	131503	BMCB	IJJ2	DJJ2IRLM

-----  
MIGRATION READINESS REPORT



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DJJ-R ----- DB2 Commands ----- Row 15 to 29 of 34  
 Command ==> Scroll ==> CSR 01

Model Commands    1.    DISPLAY DATABASE(MXCUTIL) SPACENAM(BMCDICT)    LIMIT(994)  
                   2.    DISPLAY DATABASE(MXCUTIL) SPACENAM(BMCDICT)    LIMIT(994)  
                   3.  
 Current Command    . .    -DISPLAY GROUP DETAIL

----- Command Results -----

MIGRATION READINESS REPORT

DB2 MEMBER	CODE LEVEL	SPE APAR	MIGRATION ELIGIBLE
DJJ1	V13R1M503	.....	NO
DJJ2	V13R1M503	.....	NO

MIGRATION READINESS STATUS: GROUP IS NOT READY FOR DB2 NEXT  
 REASON: NO NEXT RELEASE OF DB2 IS CURRENTLY AVAILABLE

-----  
 DISPLAY SUBGROUP ATTACH INFORMATION FOR GROUP ATTACH DJJ  
 -----

SCA    STRUCTURE SIZE:    18432 KB, STATUS= AC,    SCA IN USE:    15 %  
 LOCK1 STRUCTURE SIZE:    46080 KB

- How much memory (FTB) am I using ?
- Who is using it....
  
- DISPLAY STATS
  - INDEXMEMORYUSAGE
  - INDEXTRAVERSECOUNT
  - LOGREADERTASKS
  
- FTB FACTOR

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DJJ-R ----- DB2 Command Prompts -----

Command ==>

Select command model=>

Notice the order has recently changed

- |                              |                       |                         |
|------------------------------|-----------------------|-------------------------|
| 1. ACCESS DATABASE           | 16. DISPLAY LOCATION  | 31. SET SYSPARM         |
| 2. ALTER BUFFERPOOL *        | 17. DISPLAY LOG       | 32. START DATABASE      |
| 3. ALTER GROUPBUFFERPOOL     | 18. DISPLAY PROCEDURE | 33. START DDF           |
| 4. ALTER UTILITY *           | 19. DISPLAY RLIMIT    | 34. START FUNCTION SPEC |
| 5. ARCHIVE LOG               | 20. DISPLAY THREAD    | 35. START PROCEDURE     |
| 6. CANCEL THREAD             | 21. DISPLAY TRACE     | 36. START RLIMIT        |
| * 7. DISPLAY ARCHIVE         | 22. DISPLAY UTILITY   | 37. START TRACE         |
| 8. DISPLAY BLOCKERS          | 23. MODIFY TRACE      | 38. STOP DATABASE       |
| 9. DISPLAY BUFFERPOOL        | 24. RECOVER BSDS      | 39. STOP DDF            |
| 10. DISPLAY DATABASE         | 25. RECOVER INDOUBT   | 40. STOP FUNCTION SPEC  |
| 11. DISPLAY DDF              | 26. RECOVER POSTPONED | 41. STOP PROCEDURE      |
| 12. DISPLAY FUNCTION SPEC    | 27. RESET GENERICLU   | 42. STOP RLIMIT         |
| 13. DISPLAY GROUP            | 28. RESET INDOUBT     | 43. STOP TRACE          |
| 14. DISPLAY GROUPBUFFERPOOL  | 29. SET ARCHIVE       | 44. TERM UTILITY        |
| 15. DISPLAY INDEXMEMORYUSAGE | 30. SET LOG           |                         |

\* Note - These commands have no variable parameters and will be executed when they are selected from this panel.

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DB2 COMMANDS

SSID: DJJ

===>

Position cursor on the command line you want to execute and press ENTER

Cmd 1 ===> \_DISPLAY BLOCKERS (MXCDEMOI) DETAIL

Cmd 2 ===>

Cmd 3 ===>

...>

Cmd 4 ===>

...>

Cmd 5 ===>

...>

...>

Cmd 6 ===>

...>

...>

Cmd 7 ===>

...>

...>

...>

PRESS: ENTER to process      END to save and exit      HELP for more information

```
Vista TN3270 Session A
File Edit Font Transfer Macro Options Window Help
[Icons] [A] [B] [C] [?]

DSNT360I *DJJ1 *****
DSNT369I *DJJ1 * DISPLAY BLOCKERS DETAILED REPORT
          * 2024-05-31-12.04.32.567730
DSNT360I *DJJ1 *****
DSNT397I *DJJ1
-----
INFO: DIAGNOSTIC AND INFORMATIONAL MESSAGES
-----
T DBNAME MEMBER INFORMATIONAL DESCRIPTION
-----
I MXCDEMOI NO LOCKS OR CLAIMS FOR THE DATABASE
-----
DSN9022I *DJJ1 DSNZACMD '-DISPLAY BLOCKERS' NORMAL COMPLETION
***
```

```
Vista TN3270 Session A
File Edit Font Transfer Macro Options Window Help
[Toolbar icons]
DSNT360I *DJJ1 *****
DSNT369I *DJJ1 * DISPLAY BLOCKERS SUMMARY REPORT
                * 2026-05-05-15.44.33.972382
DSNT360I *DJJ1 *****
DSNT397I *DJJ1
-----
REPORT: DISPLAY BLOCKERS REPORT
-----
T LT DBNAME      DBID  NAME          OBID  AGE (SHORT)  TOKEN  MEMBER
- - - - -
L 02 DSNDB06      0006  SYSUSER      000F  0.000558 S      DJJ1
C 80 DSNDB06      0006  DSNAUH01    0070  0.000432 S      DJJ1
C 80 DSNDB06      0006  SYSUSER      000F  0.000432 S      DJJ1
-----
DSN9022I *DJJ1 DSNZACMD '-DISPLAY BLOCKERS' NORMAL COMPLETION
***
```

MR 0.2 05/05/26.125 04:45PM bmca 16,6



# DISPLAY Blockers (5|11)

AMI  
Data

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```

DSNT360I *DJJ1 *****
DSNT369I *DJJ1 * DISPLAY BLOCKERS DETAILED REPORT
                * 2024-05-31-12.07.24.028247
DSNT360I *DJJ1 *****
DSNT397I *DJJ1

```

## REPORT: DISPLAY BLOCKERS REPORT

```

-----
T LT DBNAME      DBID  NAME           OBID  AGE (SHORT)  TOKEN  MEMBER
-----
L 02 DSNDB06      0006  SYSUSER       000F  0.000365 S      DJJ1

```

```

CONNID:  DJJ1
CORRID:  011.DISPLB01
AGE:     0.000365 S
USERID:  SYSOPR
LUWID:   USBMCN01.DJJ1LU.DF2D34D2B792
STATE:   02
DURATION: 40
ACQUIRED: 2024-05-31-12.07.23.954891344238

```

```

-----
T LT DBNAME      DBID  NAME           OBID  AGE (SHORT)  TOKEN  MEMBER
-----
C 80 DSNDB06      0006  DSNAUH01     0070  0.000277 S      DJJ1

```

\*\*\*

### Db2 for z/OS



Change version

13.0.0




Show full table of contents

 Filter on titles

- ADMIN\_TASK\_LIST
- ADMIN\_TASK\_OUTPUT
- ADMIN\_TASK\_STATUS
- BLOCKING\_THREADS**
- MQREADALL
- MQREADALLCLOB
- MQRECEIVEALL
- MQRECEIVEALLCLOB
- XMLTABLE

[All products](#) / [Db2 for z/OS](#) / [13.0.0](#) /

Was this topic helpful?  

# BLOCKING\_THREADS table function

Last Updated: 2026-01-07

The BLOCKING\_THREADS function returns a table that contains one row for each lock or claim that threads hold against the databases, tables, indexes, or spaces that are specified in the input parameter and the other objects in the hierarchy of the specified objects.

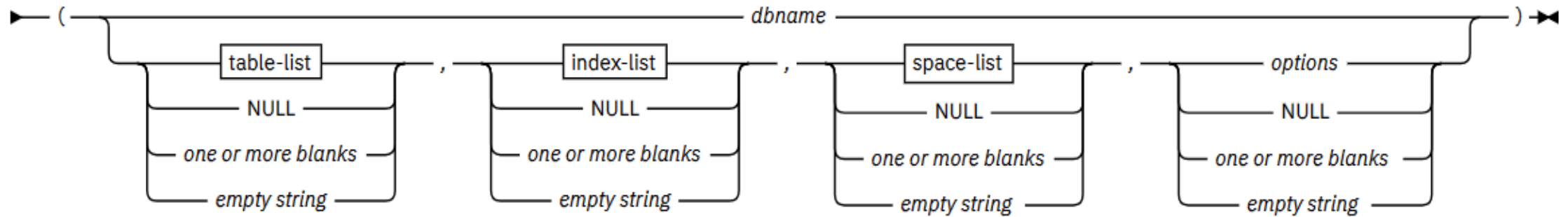
## Authorization

To query a table function, you must use a privilege set of the process that includes one of the following privileges or authorities. Database privilege or authority must be held for each database specified or for each database containing the specified table, index, or space.

- DISPLAYDB privilege
- DISPLAY privilege
- DBMAINT authority
- DBCTRL authority

## Syntax

► BLOCKING\_THREADS ►



```
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Menu Utilities Compilers Help

BROWSE      MKTMXC.BMCCAT.SQL                      Line 0000000000 Col 001 080
Command ==>                                     Scroll ==> CSR
***** Top of Data *****
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
SELECT * FROM TABLE
(SYSIBMADM.BLOCKING_THREADS( 'DSNDB06' ))
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
ACQUIRED_TS          AGE          CORRID
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2026-05-08-09.28.06.947231828125 0.079501 S          MKTMXC
2026-05-08-09.28.06.947231828125 0.079501 S          MKTMXC
2026-05-08-09.28.07.026277141357 0.000456 S          MKTMXC
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
NUMBER OF ROWS SELECTED 3
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
SQL CODE IS +100, SUCCESSFUL EXECUTION
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
NUMBER OF SQL STATEMENTS PROCESSED IS 1
NUMBER OF INPUT RECORDS READ IS 2
NUMBER OF OUTPUT RECORDS WRITTEN IS 19
```





# DISPLAY Blockers (10|11)

AMI  
Data

Vista TN3270 Session A

File Edit Font Transfer Macro Options Window Help  
[Icons]

Menu Utilities Compilers Help

BROWSE MKTMXC.BMCCAT.SQL Line 0000000000 Col 001 080  
Command ==> Scroll ==> CSR

\*\*\*\*\* Top of Data \*\*\*\*\*

```
SELECT
USERID,
SSID,
TYPE,
SUBTYPE,
CAST(OBJECT_NAME AS CHAR(8)) AS OBJECT_NM,
AGE,
ACQUIRED_TS
FROM TABLE
(SYSIBMADM.BLOCKING_THREADS('DSNDB06'))
```

USERID	SSID	TYPE	SUBTYPE	OBJECT_NM	AGE	ACQUIRED_TS
MKTMXC	DJJ1	L	06	SYSTSROU	0.006830 S	2026-05-08-09.5
MKTMXC	DJJ1	L	06	SYSTSPRM	0.006617 S	2026-05-08-09.5
MKTMXC	DJJ1	L	02	SYSUSER	0.000357 S	2026-05-08-09.5
MKTMXC	DJJ1	C	80	SYSUSER	0.000325 S	2026-05-08-09.5

- **Function level 508** activates the following new capabilities in Db2 13.
- **BLOCKING\_THREADS table function enhancements**
- Function level 508 enhances the BLOCKING\_THREADS table function and -DISPLAY BLOCKERS command to add more granular input at the table, index, and space level and **granularity at the table, index, and space level to identify threads that block online schema changes**. With the new granular input, the output of the BLOCKING\_THREADS table function and -DISPLAY BLOCKERS command includes the object type in the output.
- With the enhancements, Db2 database administrators can identify and resolve blocking threads to ensure seamless online schema changes, optimal database performance, and operational efficiency.
- APAR PH67082 delivered the functional code for BLOCKING\_THREADS table function enhancements.

- Db2 Recover **BACKOUT** option.....YES !!
- Read the fine print
  - Why ?  
“the recovery point must be within the **most recent** Db2 system checkpoints that are recorded in the BSDS for **each** member”
- Checkpoint Frequency ??
  - ZPARMs
  - DISPLAY LOG
  - DSNJU004

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```
DJJ -R ----- DSNZPARM ----- ROW 1 OF 358  
Command ==> Scroll ==> CSR  
01
```

```
CMD will show commands for this list. Type command and press ENTER  
Lists: ?  
LIKE
```

```
-----v-----1-----v-----2-----v-----3-----v-----4-----v-----5-----v-----6-----v-----7-----v-----
```

DSN6SYSP

```
AUDITST=0,  
CONDBAT=10000,  
CTHREAD=200,  
DLDFREQ=ON,  
IDBACK=100,  
IDFORE=100,  
CHKTYPE=SINGLE,  
CHKFREQ=500000,  
CHKLOGR=NOTUSED,  
CHKMINS=NOTUSED,  
MON=0,  
MONSIZE=1048576,  
SYNCVAL=NO,  
RLFAUTH=SYSIBM,  
RLF=NO,
```

```
AUDIT TRACE  
MAX REMOTE CONNECTED  
MAX USERS  
LEVELID UPDATE FREQUENCY  
MAX BATCH CONNECT  
MAX TSO CONNECT  
CHECKPOINT TYPE  
RECORDS/CHECKPOINT  
RECORDS/CHECKPOINT  
MINUTES/CHECKPOINT  
MONITOR TRACE  
MONITOR SIZE  
STATISTICS SYNC  
RESOURCE AUTHID  
RLF AUTO START
```

Vista TN3270 Session A

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Clipboard icons and keyboard shortcuts (A B C ?)

DJJ-R ----- DB2 Commands ----- Row 1 to 14 of 14  
Command ==> \_ Scroll ==> CSR 01

Model Commands     1.     DISPLAY DATABASE(DSN8D13A)   LIMIT(9994)  
                      2.     DISPLAY THREAD (\*) TYPE(\*) LIMIT(9994)  
                      3.     DISPLAY UTILITY (\*)  
Current Command     . .    -DISPLAY LOG

----- Command Results -----

DSNJ370I   \*DJJ1 DSNJJC00A LOG DISPLAY  
CURRENT COPY1 LOG = DSNDJJ.DJJ1.LOGCOPY1.DS13 IS 46% FULL  
CURRENT COPY2 LOG = DSNDJJ.DJJ1.LOGCOPY2.DS13 IS 46% FULL  
H/W RBA = 00000000054E93AFC518  
H/O RBA = 00000000054E88920FFF  
FULL LOGS TO OFFLOAD = 0 OF 6  
OFFLOAD TASK IS (AVAILABLE)  
SOFTWARE ACCELERATION IS DISABLED  
ZHYPERLINK WRITE IS DISABLED

DSNJ371I   \*DJJ1 DB2 RESTARTED 04:30:26 JUN 15, 2024  
RESTART RBA 00000000054C8FD11000  
CHECKPOINT FREQUENCY 500000 LOGRECORDS  
LAST SYSTEM CHECKPOINT TAKEN 05:35:36 JUN 20, 2024

DSN9022I   \*DJJ1 DSNJJC001 '-DISPLAY LOG' NORMAL COMPLETION

\*\*\*\*\* Bottom of data \*\*\*\*\*

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Display Filter View Print Options Search Help

```
SDSF OUTPUT DISPLAY MKTMXCA JOB82970 DSID 103 LINE CHARS 'QUEUE' FOUND  
COMMAND INPUT ==> SCROLL ==> CSR
```

### CHECKPOINT QUEUE

14:13:45 JUNE 20, 2024

```
TIME OF CHECKPOINT 14:00:48 JUNE 20, 2024  
BEGIN CHECKPOINT RBA 00000000054EBC0A73B7  
END CHECKPOINT RBA 00000000054EBC1DF542  
END CHECKPOINT LRSN 00DF46306AC667882200  
TIME OF CHECKPOINT 14:00:28 JUNE 20, 2024  
BEGIN CHECKPOINT RBA 00000000054EA1855F60  
END CHECKPOINT RBA 00000000054EA197C3F8  
END CHECKPOINT LRSN 00DF463057B2C42B7200  
TIME OF CHECKPOINT 10:35:36 JUNE 20, 2024  
BEGIN CHECKPOINT RBA 00000000054E89121F1F  
END CHECKPOINT RBA 00000000054E8924B6BC  
END CHECKPOINT LRSN 00DF46028DB0629C6400  
TIME OF CHECKPOINT 05:07:39 JUNE 20, 2024  
BEGIN CHECKPOINT RBA 00000000054E739BEDD4  
END CHECKPOINT RBA 00000000054E73AB909D  
END CHECKPOINT LRSN 00DF45B93FED0F664000  
TIME OF CHECKPOINT 05:07:35 JUNE 20, 2024  
BEGIN CHECKPOINT RBA 00000000054E6E768F08
```

Vista TN3270 Session A

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Display Filter View Print Options Search Help

SDSF OUTPUT DISPLAY MKTMXCA JOB82970 DSID 103 LINE 11,717 COLUMNS 02- 81  
COMMAND INPUT ==> SCROLL ==> CSR

```
END CHECKPOINT RBA                00000000054A44E3FDAF
END CHECKPOINT LRSN                00DF20024BEFB6F84000
TIME OF CHECKPOINT                 05:07:47 MAY 21, 2024
BEGIN CHECKPOINT RBA              00000000054A41F381D0
END CHECKPOINT RBA                00000000054A4202F7DC
END CHECKPOINT LRSN              00DF200153E697332700
TIME OF CHECKPOINT                 05:07:39 MAY 21, 2024
BEGIN CHECKPOINT RBA              00000000054A36CDEC7D
END CHECKPOINT RBA                00000000054A36DD901E
END CHECKPOINT LRSN              00DF20014C457BF80800
```



ARCHIVE LOG COMMAND HISTORY

MEMBER DJJ1

DATA SHARING GROUP DSNDJJ CONTAINS 2 MEMBERS

14:13:46 JUNE 20, 2024

DATE/SDATE	TIME/STIME	RBA	MODE	WAIT	TIME	SCOPE	CMD
MAY 23, 2024	19:28:42.1	00000000054A557E064D				M	DJJ
APR 29, 2024	03:40:14.7	0000000005457F208477				G	DJJ
SEP 01, 2023	16:20:35.9	0000000005032A89DD21				G	DJJ
AUG 25, 2023	17:18:22.1	00000000050099A26950				G	DJJ

Display Filter View Print Options Search Help

SDSF HELD OUTPUT DISPLAY ALL CLASSES LINES 20,790  
COMMAND INPUT ==>

LINE 1-14 (14)  
SCROLL ==> CSR

NP	JOBNAME	JobID	Owner	Prty	C	Max-RC	Tot-Rec	CrDate	ODisp	De
	MKTMXC	TSU84531	MKTMXC	128	Y	ABEND S522	2,095	06/21/2024	HOLD	LO
	MKTMXC	TSU86566	MKTMXC	144	Y	ABEND S622	1,532	06/23/2024	HOLD	LO
	MKTMXC	TSU87965	MKTMXC	144	Y	ABEND S622	843	06/24/2024	HOLD	LO
	MKTMXCA	JOB88131	MKTMXC	112	X	CC 0000	12,111	06/24/2024	HOLD	LO
	MKTMXCR	JOB88137	MKTMXC	144	X	CC 0000	209	06/24/2024	HOLD	LO
	MKTMXCR	JOB88143	MKTMXC	144	X	CC 0000	209	06/24/2024	HOLD	LO
	MKTMXCR	JOB88145	MKTMXC	144	X	CC 0008	212	06/24/2024	HOLD	LO
	MKTMXCR	JOB88151	MKTMXC	144	X	ABEND S04E	224	06/24/2024	HOLD	LO
	MKTMXCR	JOB88157	MKTMXC	144	X	ABEND S04E	214	06/24/2024	HOLD	LO
	MKTMXCR	JOB88159	MKTMXC	144	X	ABEND S04E	203	06/24/2024	HOLD	LO
	MKTMXCR	JOB88160	MKTMXC	144	X	CC 0004	231	06/24/2024	HOLD	LO
	MKTMXC	TSU88125	MKTMXC	144	Y	ABEND S622	926	06/24/2024	HOLD	LO
	MKTMXC	TSU89344	MKTMXC	144	Y	ABEND S622	890	06/25/2024	HOLD	LO
	MKTMXC	TSU89529	MKTMXC	144	Y	ABEND S622	891	06/25/2024	HOLD	LO

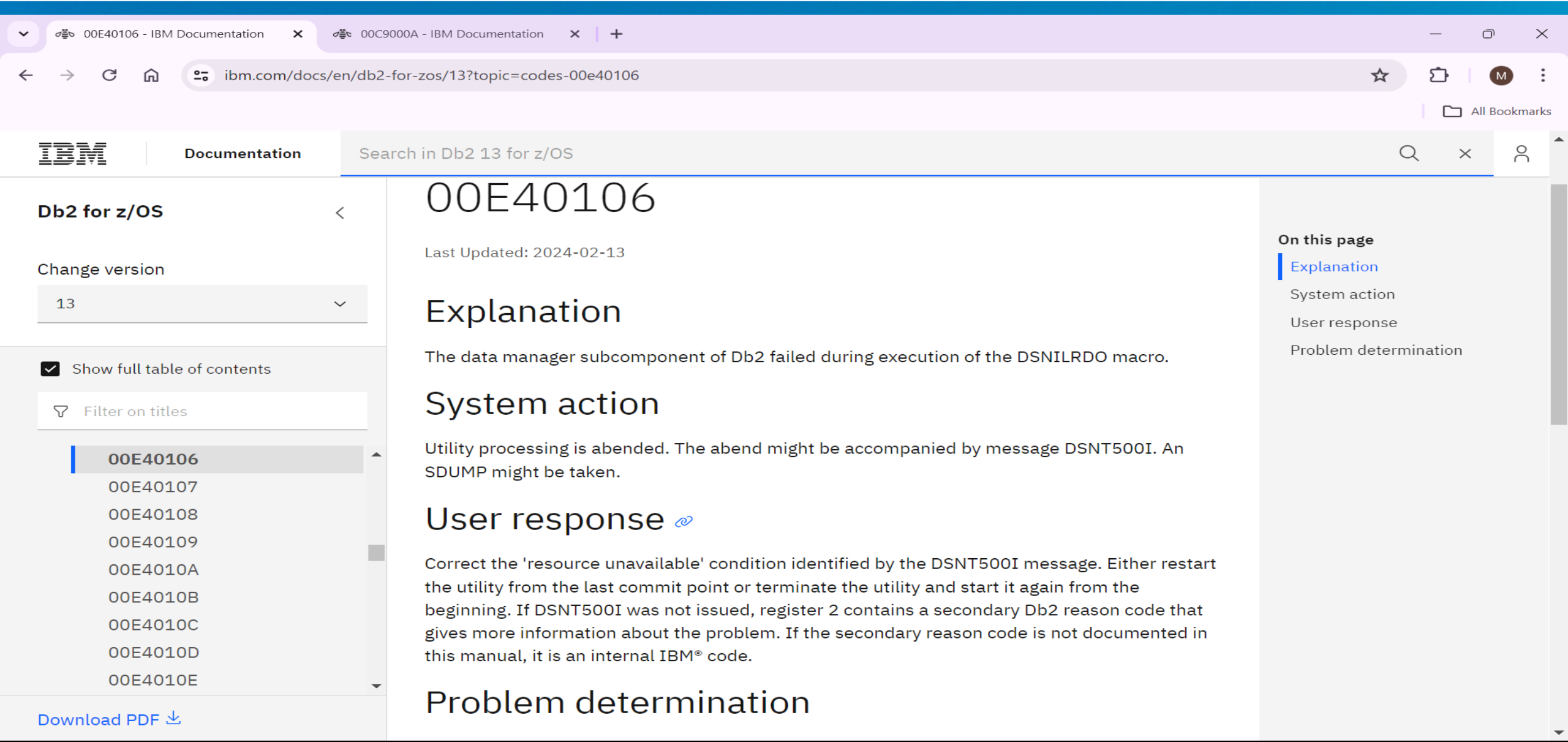


Vista TN3270 Session A

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```
Display Filter View Print Options Search Help
-----
SDSF OUTPUT DISPLAY MKTMXCR JOB88157 DSID      4 LINE 83      COLUMNS 02- 81
COMMAND INPUT ==>          SCROLL ==> CSR
      CPU:      0 HR  00 MIN  00.02 SEC      SRB:      0 HR  00 MIN  00.00 SEC
DSNU000I      176 14:17:29.04 DSNUGUTC - OUTPUT START FOR UTILITY, UTILID = BACKOU
DSNU1044I      176 14:17:29.05 DSNUGTIS - PROCESSING SYSIN AS EBCDIC
DSNU050I      176 14:17:29.05 DSNUGUTC - RECOVER TABLESPACE MXCDEMOC.CISTS03 BACK
X'00DF41CC57DD821B1800'
DSNU3031I *DJJ1 176 14:17:29.05 DSNUHUTL - UTILITY HISTORY COLLECTION IS ACTIVE.
      LEVEL: OBJECT, EVENTID: 133236
DSNU3033I *DJJ1 176 14:17:29.06 DSNUHOBJ - SYSIBM.SYSOBJEVENTS ROWS INSERTED FOR
DSNU1542I *DJJ1 176 14:17:29.07 DSNUCAIN - RECOVER BACKOUT ANALYSIS PROCEEDING F
X'00DF4B7EA951CFC76A00'
DSNU1569I *DJJ1 176 14:17:29.07 DSNUCAIN - RECOVERY LOGPOINT IS X'00DF4B7EA951CF
DSNU532I *DJJ1 176 14:17:29.07 DSNUCALA - RECOVER TABLESPACE MXCDEMOC.CISTS03
DSNU578I *DJJ1 176 14:17:29.07 DSNUCALA - SYSLGRNX INFORMATION FOR MEMBER DJJ1
DSNU1568I *DJJ1 176 14:17:29.07 DSNUCALA - LOGAPPLY PHASE: 0 LOG RECORDS READ,
DSNU1550I *DJJ1 176 14:17:29.07 DSNUCALC - LOGCSR IS STARTED FOR MEMBER DJJ1, PR
X'00000000054D6375432E'
DSNU017I      176 14:17:29.09 DSNUGBAC - UTILITY DATA BASE SERVICES MEMORY EXECUTI
CAUSE=X'00C9000A'
***** BOTTOM OF DATA *****
```



The screenshot shows a web browser displaying the IBM documentation page for error code 00E40106. The browser tabs include '00E40106 - IBM Documentation' and '00C9000A - IBM Documentation'. The address bar shows the URL 'ibm.com/docs/en/db2-for-zos/13?topic=codes-00e40106'. The page header includes the IBM logo, 'Documentation', and a search bar. The left sidebar shows the navigation menu for 'Db2 for z/OS' with a 'Change version' dropdown set to '13' and a 'Show full table of contents' checkbox checked. A table of contents is visible with '00E40106' selected. The main content area displays the error code '00E40106', its last update date '2024-02-13', and sections for 'Explanation', 'System action', 'User response', and 'Problem determination'. The 'Explanation' section states that the data manager subcomponent failed during execution of the DSNILRDO macro. The 'System action' section notes that utility processing is abended and might be accompanied by message DSNT500I. The 'User response' section advises correcting the 'resource unavailable' condition. The 'Problem determination' section is partially visible. A right sidebar contains a 'On this page' section with links for 'Explanation', 'System action', 'User response', and 'Problem determination'. A 'Download PDF' link is located at the bottom left of the page.

00E40106 - IBM Documentation

00C9000A - IBM Documentation

ibm.com/docs/en/db2-for-zos/13?topic=codes-00e40106



Documentation

Search in Db2 13 for z/OS

Db2 for z/OS

Change version

13

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00E40106

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00E4010A

00E4010B

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00E4010E

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## 00E40106

Last Updated: 2024-02-13

### Explanation

The data manager subcomponent of Db2 failed during execution of the DSNILRDO macro.

### System action

Utility processing is abended. The abend might be accompanied by message DSNT500I. An SDUMP might be taken.

### User response [↗](#)

Correct the 'resource unavailable' condition identified by the DSNT500I message. Either restart the utility from the last commit point or terminate the utility and start it again from the beginning. If DSNT500I was not issued, register 2 contains a secondary Db2 reason code that gives more information about the problem. If the secondary reason code is not documented in this manual, it is an internal IBM® code.

### Problem determination

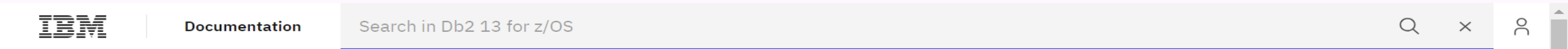
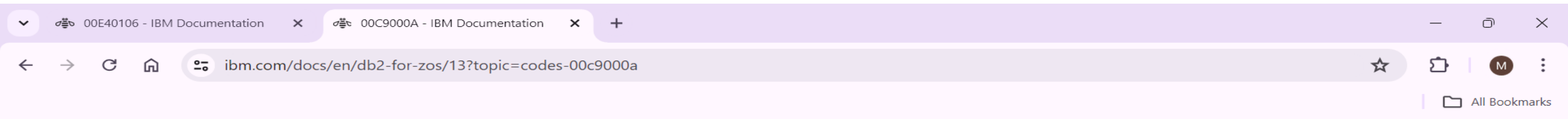
#### On this page

[Explanation](#)

[System action](#)

[User response](#)

[Problem determination](#)



### Db2 for z/OS

Change version

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00C9000A

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00C90060

00C90063

00C90064

00C90067

00C9006D

00C90070

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Was this topic helpful?

## 00C9000A

Last Updated: 2024-05-21

### Explanation

A resource was unavailable. Some of the circumstances in which this reason code is issued are:

- The Db2 database manager attempted to read the log for a READS request for IFCID 0306.
- Information about the maximum length of LOB column data in the SPT01 directory table space was not available because the Db2 catalog and directory was undergoing point-in-time recovery. This reason code is generated as part of DISPLAY GROUP output.
- `< At Db2 startup, during building of the trusted context cache, the catalog was unavailable. >`
- `< At Db2 startup, during checking for available audit policies, the catalog was unavailable. >`

### System action

`< SQLCODE -904 is returned to the user in the following cases:`

- The Db2 database manager attempted to read the log for a READS request for IFCID 0306.

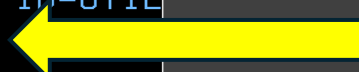
#### On this page

[Explanation](#)

[System action](#)

[User response](#)

```
Display Filter View Print Options Search Help
-----
SDSF OUTPUT DISPLAY DJJ1MSTR STC85183 DSID      2 LINE 1,440  COLS 02- 81
COMMAND INPUT ==>                                SCROLL ==> CSR
14.08.23 STC85183 DSNJ104I *DJJ1 DSNJR206 RECEIVED ERROR STATUS  472
              472              00000004 FROM DSNPCLOC FOR
              472              DSNNAME=DSNDJJ.DJJ1.ARCLOG1.D24168.T2117535.A0171253
14.08.23 STC85183 DSNJ113E *DJJ1 DSNJR003 RBA '00000000054D63754000'  473
              473              NOT IN ANY ACTIVE OR ARCHIVE LOG DATA SET. CONNECTION-ID=UTIL
              473              CORRELATION-ID=MKTMXCR, MEMBER-ID=1
14.08.55 STC85183 DSN3201I *DJJ1 ABNORMAL EOT IN PROGRESS FOR  500
              500              USER=MKTMXC CONNECTION-ID=UTILITY CORRELATION-ID=MKTMXCR
              500              JOBNAME=MKTMXCR ASID=00E4 TCB=007C6D90
14.17.29 STC85183 DSNJ104I *DJJ1 DSNJR206 RECEIVED ERROR STATUS  162
              162              00000004 FROM DSNPCLOC FOR
              162              DSNNAME=DSNDJJ.DJJ1.ARCLOG1.D24168.T2117535.A0171253
14.17.29 STC85183 DSNJ113E *DJJ1 DSNJR003 RBA '00000000054D63754000'  163
              163              NOT IN ANY ACTIVE OR ARCHIVE LOG DATA SET. CONNECTION-ID=UTIL
              163              CORRELATION-ID=MKTMXCR, MEMBER-ID=1
14.17.31 STC85183 DSN3201I *DJJ1 ABNORMAL EOT IN PROGRESS FOR  164
              164              USER=MKTMXC CONNECTION-ID=UTILITY CORRELATION-ID=MKTMXCR
              164              JOBNAME=MKTMXCR ASID=00E4 TCB=007C6D90
14.27.14 STC85183 DSNU971I *DJJ1 DSNUGCKP - TABLESPACE  266
              266              MXCDEMOC.CISTS03 IS CHECK PENDING OR AUX CHECK PENDING
```



- CREATE or ALTER.....COPY YES !!

- ALTER PENDING DDL ??

- Incrementals ??

- “Allows full image or concurrent copies”

- “**COPY** to **YES** causes additional SCA until the next full or incremental image copy is taken” ??

- REORG INDEX ??

- FLASHCOPY YES



# RECOVER/REBUILD INDEX ?? (2|5)

AMI  
Data

Vista TN3270 Session A

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```

SDSF OUTPUT DISPLAY MKTMXCA JOB84610 DSID 103 LINE 0 COLUMNS 02- 81
COMMAND INPUT ==> SCROLL ==> CSR
***** TOP OF DATA *****
DSNU000I 173 11:21:35.71 DSNUGUTC - OUTPUT START FOR UTILITY, UTILID = IDUGTS
DSNU1044I 173 11:21:35.72 DSNUGTIS - PROCESSING SYSIN AS EBCDIC
DSNU050I 173 11:21:35.72 DSNUGUTC - COPY INDEXSPACE MXCDEMOC.DEMO1C8W COPYDD
DSNU3031I *DJJ1 173 11:21:35.74 DSNUHUTL - UTILITY HISTORY COLLECTION IS ACTIVE.
LEVEL: OBJECT, EVENTID: 132540
DSNU402I 173 11:21:35.75 DSNUBBID - INCREMENTAL IMAGE COPY DISALLOWED FOR IND
FULL IMAGE COPY WILL BE TAKEN
DSNU3033I *DJJ1 173 11:21:35.77 DSNUHOBJ - SYSIBM.SYSOBJEVENTS ROWS INSERTED FOR
DSNU400I 173 11:21:35.82 DSNUBBID - COPY PROCESSED FOR INDEXSPACE MXCDEMOC.DE
NUMBER OF PAGES=6
AVERAGE PERCENT FREE SPACE PER PAGE = 29.16
PERCENT OF CHANGED PAGES = 20.00
ELAPSED TIME=00:00:00
DSNU428I 173 11:21:35.83 DSNUBBID - DB2 IMAGE COPY SUCCESSFUL FOR INDEXSPACE
DSNU010I 173 11:21:35.84 DSNUGBAC - UTILITY EXECUTION COMPLETE, HIGHEST RETUR
***** BOTTOM OF DATA *****

```





# RECOVER/REBUILD INDEX ?? (3 | 5)

AMI  
Data

Vista TN3270 Session A

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```
-----  
SDSF OUTPUT DISPLAY MKTMXCA  JOB55661  DSID   103 LINE 1          COLUMNS 02- 133  
COMMAND INPUT ==>                               SCROLL ==> CSR  
DSNU000I   149 11:23:43.38 DSNUGUTC - OUTPUT START FOR UTILITY, UTILID = MXCIBMRI  
DSNU1044I  149 11:23:43.39 DSNUGTIS - PROCESSING SYSIN AS EBCDIC  
DSNU050I   149 11:23:43.39 DSNUGUTC - REORG INDEX MKTMXC.DEMO_ACCTNAME SHRLEVEL CHANGE WORKDDN(SYSUT1) SORTDEVT  
SYSDA SORTNUM 4  
DSNU3031I *DJJ1 149 11:23:43.39 DSNUHUTL - UTILITY HISTORY COLLECTION IS ACTIVE.  
                LEVEL: UTILITY, EVENTID: 95967  
DSNU2909I  149 11:23:43.51 DSNURITD - INDEX OR INDEX PARTITIONS WILL BE PROCESSED IN PARALLEL, NUMBER OF TASKS = 2  
DSNU701I  *DJJ1 149 11:23:43.51 DSNURUIX - 32 INDEX ENTRIES UNLOADED FROM 'MKTMXC.DEMO_ACCTNAME'  
DSNU252I   149 11:23:43.52 DSNURITD - UNLOAD PHASE STATISTICS - NUMBER OF RECORDS UNLOADED=32 FOR INDEX  
MKTMXC.DEMO_ACCTNAME  
DSNU250I   149 11:23:43.52 DSNURITD - UNLOAD PHASE COMPLETE, ELAPSED TIME=00:00:00  
DSNU349I  *DJJ1 149 11:23:43.52 DSNURBXI - BUILD PHASE STATISTICS - NUMBER OF KEYS=32 FOR INDEX MKTMXC.DEMO_ACCTNAME  
DSNU258I   149 11:23:43.52 DSNURITD - BUILD PHASE STATISTICS - NUMBER OF INDEXES=1  
DSNU259I   149 11:23:43.52 DSNURITD - BUILD PHASE COMPLETE, ELAPSED TIME=00:00:00  
DSNU1138I *DJJ1 149 11:23:43.54 DSNURLOG - DRAIN ALL WITH START TIME 2024-05-28-11.23.43.543893 HAS COMPLETED  
SUCCESSFULLY  
DSNU1139I  149 11:23:43.54 DSNURLGD - FINAL LOG ITERATION STATISTICS. NUMBER OF LOG RECORDS = 0  
DSNU386I   149 11:23:43.54 DSNURLGD - LOG PHASE STATISTICS. NUMBER OF ITERATIONS = 2, NUMBER OF LOG RECORDS = 0  
DSNU385I   149 11:23:43.54 DSNURLGD - LOG PHASE COMPLETE, ELAPSED TIME = 00:00:00  
DSNU387I   149 11:23:43.55 DSNURSWT - SWITCH PHASE COMPLETE, ELAPSED TIME = 00:00:00  
DSNU568I  *DJJ1 149 11:23:43.64 DSNUGSRX - INDEX MKTMXC.DEMO_ACCTNAME IS IN INFORMATIONAL COPY PENDING STATE  
DSNU010I   149 11:23:43.65 DSNUGBAC - UTILITY EXECUTION COMPLETE, HIGHEST RETURN CODE=0
```

\*\*\*\*\* BOTTOM OF DATA \*\*\*\*\*

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```
-----  
SDSF OUTPUT DISPLAY MKTMXCA JOB55681 DSID 103 LINE 20 COLUMNS 02- 133  
COMMAND INPUT ==> SCROLL ==> FSD  
DSNU421I 149 11:35:28.02 DSNUGFUM - START OF DFSMS MESSAGES  
  
PAGE 0001 5695-DF175 DFSMSDSS V2R05.0 DATA SET SERVICES 2024.149 11:35  
ADR030I (SCH)-PRIME( 0), DCB VALUES HAVE BEEN MODIFIED FOR SYSPRINT. BLKSIZE VALUE MODIFIED FROM 0 TO 128  
COPY DATASET(INCLUDE( -  
DSNDJJ.DSNDBC.MXCDEMOC.DEMO1C8W.J0001.A001 )) -  
RENAMEU( -  
(DSNDJJ.DSNDBC.MXCDEMOC.DEMO1C8W.J0001.A001 , -  
DSNDJJ.MXCDEMOC.DEMO1C8W.N00001.JKM1174V )) -  
REPUNC ALLDATA(*) ALLEXCP CANCELERROR SHARE FR(REQ) -  
VOLCOUNT(ANY) TGTALLOC(SRC)  
ADR101I (R/I)-RI01 (01), TASKID 001 HAS BEEN ASSIGNED TO COMMAND 'COPY '  
ADR109I (R/I)-RI01 (01), 2024.149 11:35:28 INITIAL SCAN OF USER CONTROL STATEMENTS COMPLETED  
ADR050I (001)-PRIME(01), DFSMSDSS INVOKED VIA APPLICATION INTERFACE  
ADR016I (001)-PRIME(01), RACF LOGGING OPTION IN EFFECT FOR THIS TASK  
ADR006I (001)-STEND(01), 2024.149 11:35:28 EXECUTION BEGINS  
ADR711I (001)-NEWDS(01), DATA SET DSNDJJ.DSNDBC.MXCDEMOC.DEMO1C8W.J0001.A001 HAS BEEN ALLOCATED WITH NEWNAME  
DSNDJJ.MXCDEMOC.DEMO1C8W.N00001.JKM1174V USING STORCLAS DB2, NO DATACLAS, AND MGMTCLAS NONMIG  
ADR806I (001)-T0MI (03), DATA SET DSNDJJ.DSNDBC.MXCDEMOC.DEMO1C8W.J0001.A001 COPIED USING A FAST REPLICATION FUNCTION  
ADR801I (001)-DDDS (01), 2024.149 11:35:28 DATA SET FILTERING IS COMPLETE. 1 OF 1 DATA SETS WERE SELECTED: 0 FAILED  
SERIALIZATION AND 0 FAILED FOR OTHER REASONS  
ADR454I (001)-DDDS (01), THE FOLLOWING DATA SETS WERE SUCCESSFULLY PROCESSED  
DSNDJJ.DSNDBC.MXCDEMOC.DEMO1C8W.J0001.A001
```

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DJJ -R ----- IMAGECOPY LIST ----- ROW 1 OF 4  
Command ==> Scroll ==> CSR  
02

CMD will show commands for this list. Type command and press ENTER

Lists: ? DB IC IM IP IS IX OEV TS UTL

QUALIFIER: INDEX=MKTMXC.DEMO\_ACCTNAME

Cmd	Ctyp	Database	Tablespace	Dsnum	Operation	Buty	Date	Time
IX		MXCDEMOC	DEMO1C8W	0	COPY FULL YES		2024-06-21	11.21.35
IX		MXCDEMOC	DEMO1C8W	0	COPY FULL YES	FC	2024-05-31	15.41.41
IX		MXCDEMOC	DEMO1C8W	0	REORG LOG(NO)		2024-05-31	15.41.41
IX		MXCDEMOC	DEMO1C8W	0	ALTER		2024-05-30	12.51.33

\*\*\*\*\* BOTTOM OF DATA \*\*\*\*\*

- What are they ?
- How to list them
  - Why ?
- Modify them
  - SET SYSPARM
- Db2 13 ??
  - PAGESET\_PAGENUM
  - FTB\_NON\_UNIQUE\_INDEX
  - NUMLKUS & NUMLUKTS
    - Db2 12 FL507
  - MAXARCH
  - DSMAX
  - IRLMRWT
    - Current lock timeout
    - Deadlock Resolution Priority

- Db2 Explain – possibly the **Best** tool for SQL Tuning
- How many tables now ?
- What's What
- Keeping them current
  - Db2 13 Format
  - ADMIN\_EXPLAIN\_MAINT

- There's a bunch.....
- **ADMIN\_INFO\_SYSPARM**
- **ADMIN\_UPDATE\_SYSPARM**
- **ADMIN\_EXPLAIN\_MAINT**
- **DSNACCOX**

- Sample Apps & JCL !!
  - DSNTEJ6Z
  - DSN8ED7
- **ADMIN\_INFO\_SYSPARM**

- Deprecated Objects !!!
- activation enabled by APAR PH07672 - **April 2019**
- Prevents following types of objects from being created
  - Non-UTS Segmented and Partitioned Tablespaces
  - Synonyms
  - HASH Organized Tables
- **Note:**
  - Existing objects of these types will **still work**.....
  - Prevents use of Multi-Table Tablespaces

If you really need to create one of the deprecated object types after you activate FL504

.....you do have an option

- **SET CURRENT APPLICATION COMPATIBILITY = 'V12R1M503'**
- This can be used to allow a DDL stream to keep working,
- even after you activate 504 or later.
- BUT....be careful what you ask for.

```
CREATE TABLESPACE BMCTS
```

```
  IN DB123
```

```
  USING STOGROUP SYSDEFLT
```

```
  ERASE NO
```

```
  FREEPAGE 0
```

```
  PCTFREE 5
```

```
  SEGSIZE 4
```

```
  BUFFERPOOL BPO
```

```
SEGSIZE = 4
```

```
DSSIZE = 0
```

```
MAXPARTITIONS = 0
```

```
CREATE TABLESPACE BMCTS
```

```
  IN DB123
```

```
  USING STOGROUP SYSDEFLT
```

```
  ERASE NO
```

```
  FREEPAGE 0
```

```
  PCTFREE 5
```

```
  SEGSIZE 4
```

```
  BUFFERPOOL BP0
```

```
SEGSIZE = 32
```

```
DSSIZE = 4
```

```
MAXPARTITIONS = 256
```

Table 2. DSSIZE defaults for partition-by-growth table spaces

Page size	MAXPARTITIONS value	DSSIZE default value
Any	1 - 254	4 G
4K	255 - 4096	4 G
8K	255 - 4096	8 G
16K	255 - 4096	16 G
32K	255 - 4096	32 G

**MAXPARTITIONS = 254**

- Unload Authority !!!
- AUTH\_COMPATABILITY zparm
- RACF changes
- IFCID 404
- **APAR PH20168 (June 2020)**
  - <https://www.ibm.com/support/pages/apar/PH20168>

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