



Database Management for Db2 for z/OS 20.0 (Db2 Tools) Customer Community Update

Team Product Owners

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Product Owners

Andrew Badgley

Jakub Hofman

Rabah Beggar

Srinivas Adupa

andrew.badgley@broadcom.com

jakub.hofman@broadcom.com

rabah.beggar@broadcom.com

srinivas.adupa@broadcom.com

Agenda

Sysview for Db2

- Supporting Exception Names

Detector

- zIIP Support for Collection Externalization
- Report or Unload Metrics by SSID for a Data Sharing Group

Plan Analyzer

- REST Service Package Support for Bind Services

RC/Query

- Generate CREATE OR REPLACE PROCEDURE DDL
- List AOTs (Accelerator only tables) in reports

Please Provide Feedback...





Sysview for Db2: Supporting Exception Names (LU04287)

Rabah Beggar

Rabah.beggar@Broadcom.com

Overview.

Identifying an exception that a user would like to update is not straight forward.

So we are introducing Exception Names to SYSVIEW for Db2 exception definitions. Every exception gets a name to simplify its identification and maintenance.

Uniqueness of Exception Names can be enforced by defining an Alternate Index on the exception file.

“As a DBA I would like to have an exception name for exception definitions so I am able to easily identify the ones I need to work on/update.”

During the start up, the data collector will upgrade the exception file (a VSAM file) and assign a unique exception name to every existing exception definition.

Users will also be able to edit/update the exception name using IDB2 online interface.

After exception file upgrade: an Alternate Index for the exception file should be created by running the new sample JCL IDB2XAIX (or ssidXAIX) in IDB2 SOURCE libs to enforce uniqueness of each 'Exception name'. Uniqueness of the exception name is important for future enhancements

View IDB2.WK3999S.EXCPDEF											Columns 00217 00328	
=COLS> ---2---+---3---+---4---+---5---+---6---+---7---+---8---+---9---+---0---+---1---+---2---+---												
***** Top of Data *****												
000001												
000002	SS000001	TYR	High number EDM pool load failures due to full									pool: &VALUEXX
000003	SS000002	TYR	High number DBD pool load failures due to full									pool: &VALUEXX
000004	SS000003	TYR	High number statement cache pool load failures									due to full pool: &VALUEXX
000005	SS000004	TYR	High number stmt skeleton pool load failures due									to full pool: &VALUEXX
000006	SS000005	TYR	High number of times DB2 coordinator bypassed a									DB2 due to lack of buffer pool
000007	SS000006	TYR	High number of times access path recalculated									due to change in sysplex confi
000008	SS000007	TYR	High number of times access path recalculated									due to buffer pool resource sh
000009	SS000008	TYR	High number of times PREPARE was restricted due									to an index in pending state:
000010	SS000009	TYR	High number of times sparse index was disabled									because of insufficient storag
000011	SS000010	TYR	High number of times output log buffer was									unavailable: &VALUEXX

Updated Reports

The batch DBGEXRPT (both DETAIL and ONELINE) report utility has been updated to display 'Exception name' of every exception, if available.

12021/12/06 09:24:23		LIST OF EXCEPTION DEFINITIONS		PAGE	
		TYPE: SUBSYSTEM			
		EXCEPTION TEXT			
OSTATUS	SSN			NAME	
ACTIVE	***	HIGH NUMBER EDM POOL LOAD FAILURES DUE TO FULL POOL: &VALUEXX		SS000087	
DETAILS:					
EXCEPTION TYPE: THE VALUE OF A CUMULATIVE/SNAPSHOT FIELD					
FIELD #1: # OF EDM REQUEST FAILURES - NO PAGES AVAILABLE					
FIELD #2: N/A					
EXECUTION CONTROLS:					
LEVELS ACTIVE (THRESHOLD): INFO(INACTIVE) WARN(1) CRIT(100) TRIP WHEN: HIGH					
FROM 00:00 TO 24:00 AND FROM 00:00 TO 00:00 ON S M T W T F S. RESET AT 24:00 CHECK EVERY 5 SECONDS					
DISPLAY CONTROLS:					
DISPLAY (I) FOR 60 SECONDS AFTER 1 TIMES / SOUND ALARM (C) / SCREEN COMMAND:&XCASEDM					
LOGGING & NOTIFICATION CONTROLS:					
LOG EXECPTION (W) AFTER 1 TIMES / WTO (N) / HOLD WTO (N) / TSO SEND (N)-*NONE* (N)-*NONE* (N)-*NONE*					
ACTIONS:					
START REQUEST (N)-*NONE* (N)-*NONE* (N)-*NONE* / IMOD (N)-*NONE* ISERV: *NONE*					
MVS COMMAND (N)-*NONE*					
PTT COMMAND (N)-*NONE*					
OPS/MVS API EVT(N)					
SNMP TRAP/EMAIL(N) DESTINATION GROUP (*NONE*) AFTER 0 OCCURRENCES					

09:24/12/06 09:24:23

LIST OF EXCEPTION DEFINITIONS

TYPE: DATA BASE

ONLINE report

OSTA/NM SSN DATABASE PAGESET <----- EXCEPTION TEXT ----->

ACTIVE **** ***** HIGH NUMBER OF DATA SET OPENS, &VALUEXX, FOR DATABASE &DBNAMEX AND PAGESET &PAGESET

DB000001 *****

INACT **** ***** HIGH NUMBER OF DATA SET EXTENTS, &VALUEXX, FOR DATABASE &DBNAMEX AND PAGESET &PAGESET

DB000002 *****

ORINACT **** ***** DATABASE, &DBNAMEX, AND PAGESET, &PAGESET, IS IN A RESTRICTED STATE: &DATABASESTATUSX

DB000003 *****

INACT **** ***** HIGH PERCENT SPACE UTILIZED BY DATABASE &DBNAMEX AND PAGESET &PAGESET = &VALUEXX% USED

DB000004 *****

ORINACT **** DSNDB07 ***** HIGH PERCENT SPACE UTILIZED BY DATABASE &DBNAMEX AND PAGESET &PAGESET = &VALUEXX% USED

DB000005 *****

12021/12/06 09:24:23

LIST OF EXCEPTION DEFINITIONS

TYPE: SQL STATEMENT

OSTA/NM SSN CONNECT PLANNAME TYPE <----- EXCEPTION TEXT ----->

INACT **** ***** DYN LONG RUNNING SQL: PLAN=&PLANNAM, AUTH=&AUTHIDX, CONN=&CONNAM, CORR=&CORRELATION, RESP=&VALUEXX

EQ000001 *****

12021/12/06 09:24:23

LIST OF EXCEPTION DEFINITIONS

TYPE: IQL SHADOW

OSTATUS SSN IQL ID NAME SEVERITY

ACTIVE **** ***** CRITICAL

ACTIVE **** ***** WARNING

ACTIVE **** ***** WARNING

ACTIVE **** ***** WARNING

ACTIVE **** ***** WARNING

ACTIVE **** ***** INFORMATIONAL

ACTIVE **** ***** INFORMATIONAL

ACTIVE **** ***** INFORMATIONAL

ACTIVE **** ***** INFORMATIONAL

ACTIVE **** ***** CRITICAL

ACTIVE **** ***** WARNING

List of Subsystem/Database/Application Exception Definitions

Row 1/408

Actions: U=Update current and permanent, P=Update permanent definition only,
C=Copy, D=Delete, A=Activate, I=Inactivate, B=Browse. Use F6 to add.

INACT	****	High number of checkpoints taken during the last
SS000136	PROD	hour. Number of mins per checkpoint was &VALUEXX

Row 1/15

Actions: U=Update current and permanent, P=Update permanent definition only,
C=Copy, D=Delete, A=Activate, I=Inactivate, B=Browse. Use F6 to add.

INACT

Row 1/135

Actions: U=Update current and permanent, P=Update permanent definition only,
C=Copy, D=Delete, A=Activate, I=Inactivate, B=Browse. Use F6 to add.

```
INACT      ****      *****      SQL      Long running SQL: PLAN=&PLANNAM, AUTH=&AUTHIDX,
SQ000001      *****      CONN=&CONNAM, CORR=&CORRELATION, Resp=&VALUEXX
```

```
INACT ***** REAL Application is running with repeatable read
AP000022 *****
```

ISPF Panels Update

View/Update Exception Definition -- Exception Identification Data

View/Update Exception Definition

Row 1/13

Choose one of the following with an "S". Then press Enter.

Exception name: SS000136

Type: Ratio of one delta field value over another delta value for an interval

V1

V2

Exception Identification Data

Row 1/14

Verify the information below. Then press Enter.

Exception name: SS000136

Type: Ratio of one delta field value over another delta value for an interval

V1: Total # of minutes DB2 has been active

DB2ELAPM

V2: Total # of checkpoints taken

QWSDCKPT

Is the exception to occur when the value is higher or equal to, or lower than or equal to the threshold value? . . . : LOW (Enter HIGH or LOW)

Does exception apply to test, prod. or both? : PROD (Enter TEST/PROD/BOTH)

Qualifying data (may be generically specified)

Subsystem name : ****

Exception events reporting in REST API

Menu Print Tools Help		CA SYSVIEW for DB2		DT32 CA32	01/26/22 07:12:28
		20.0		DTGPDV20	JIRAN01
R/DSQALERT		IDB2 Exceptions		FOCUS OFF	
				Row 1/44016	
ROWSET					
EXP-FIRST-TIMESTAMP	T		00026	2022-01-26	
EXP-LAST-TIMESTAMP	T		00026	2022-01-26	
EXP-INSTANCEID	C Y P		00016	0000027900	
EXP-MESSAGE	C		00100	Average nu	
EXP-NUM-SEVERITY	I		00016		
EXP-SEVERITY	C		00004	CRIT	
EXP-TYPE	C		00012	SUBSYSTEM	
EXP-SUBTYPE	C		00008	BP00L	
EXP-VALUE	C		00008	3	
EXP-SSID	C S		00004	DT32	
EXP-DSGROUP	C		00008	DSNDTGP	
EXP-DSFUNCTION	C Y		00024	IDB2:DSQST	
EXP-CATEGORY	C Y		00020	N/A	
EXP-BPOOL	C BP		00006	BP0	
EXP-GBPOOL	C GP		00007		
EXP-DATABASE	C		00008	N/A	
EXP-PAGESET	C		00008		
EXP-ACE	C AP		00008	000000000	
EXP-AUTHID	C UP		00008		
EXP-PLAN	C PP		00008		
EXP-CONNNAME	C NP		00008		
EXP-CORRID	C RP		00012		
EXP-NAME	C NM		00008	SS000130	
Command ==>					
F1=Help		8=Down		3=End	
F7=Up				5=Expand	
				12=Return	

Field Level Help

Exception Name

This field identifies the name of the exception.

IQL Name: EXP-NAME

Responses

Curl

```
curl -X 'GET' \
  'https://usilca32.lvn.broadcom.net:63000/dbm/api/v1/idb2/generic?function=DSQALERT&delta=false&agent=CA32DT322000DV20&ssid=DT32' \
  -H 'accept: application/json' \
  -H 'Authorization: Basic amlyYW4wMTpXaW50ZXIyMQ=='
```

Request URL

```
https://usilca32.lvn.broadcom.net:63000/dbm/api/v1/idb2/generic?function=DSQALERT&delta=false&agent=CA32DT322000DV20&ssid=DT32&flattenResults=true
```

Server response

Code

Details

200

Response body

```
{
  "type": "array",
  "response": [
    {
      "EXP-FIRST-TIMESTAMP": "2022-01-26 06:44:51.018592",
      "EXP-LAST-TIMESTAMP": "2022-01-26 07:06:01.305515",
      "EXP-INSTANCEID": "0000027900031D9F",
      "EXP-MESSAGE": "Average number of pages written per write I/O is low for BP0 Ratio value is 3",
      "EXP-NUM-SEVERITY": "1",
      "EXP-SEVERITY": "CRIT",
      "EXP-TYPE": "SUBSYSTEM",
      "EXP-SUBTYPE": "BPOOL",
      "EXP-VALUE": "3",
      "EXP-SSID": "DT32",
      "EXP-DSGROUP": "DSNDTGP",
      "EXP-DSFUNCTION": "IDB2:DSQSTBP",
      "EXP-CATEGORY": "N/A",
      "EXP-BPOOL": "BP0",
      "EXP-GBPOOL": "",
      "EXP-DATABASE": "N/A",
      "EXP-PAGESET": "",
      "EXP-ACE": "000000000",
      "EXP-AUTHID": "",
      "EXP-PLAN": "",
      "EXP-CONNNAME": "",
      "EXP-CORRID": "",
      "EXP-NAME": "SS000130"
    }
  ]
}
```

Download

Exception events reporting in OPS/MVS

```
VIEW      TSPROD.OPS.USER.RULES(OFSRULE) - 01.00      Columns 00001 00080
Command ==>      Scroll ==> CSR
000061
000062 call add_line 'System          : ', API.SYSTEM
000063 call add_line 'DB2 Subsystem Name : ', API.DB2SUBSYS
000064 call add_line 'Data Sharing Group : ', API.DSGROUP
000065 call add_line 'Data Collector Job  : ', API.JOBNAME
000066 call add_line 'Data Collector ASID : ', API.DCASID
000067 call add_line 'SYSVDB2 Version   : ', API.VERSION
000068 call add_line 'Exception Type     : ', API.TYPE
000069 call add_line 'Exception Severity : ', API.SEVERITY
000070 call add_line 'Exception Token    : ', API.TOKEN
000071 call add_line 'Date and Time     : ', API.DATETIME
000072 call add_line 'Value              : ', API.VALUE
000073 call add_line 'Buffer Pool Subtype : ', API.SUBTYPE
000074 call add_line 'Buffer Pool        : ', API.BPNAME
000075 call add_line 'Group Buffer Pool    : ', API.GBPNAME
000076 call add_line 'Database Name       : ', API.DBNAME
000077 call add_line 'Pageset            : ', API.PAGESET
000078 call add_line 'ACE                 : ', API.ACE
000079 call add_line 'Plan                 : ', API.PLAN
000080 call add_line 'Connection            : ', API.CONN
000081 call add_line 'Correlation           : ', API.CORRID
000082 call add_line 'Authorization ID      : ', API.AUTHID
000083 call add_line 'Collection            : ', API.COLLDID
000084 call add_line 'Package              : ', API.PACKAGE
000085 call add_line 'Package Version         : ', API.PACKVER
000086 call add_line 'Statement ID           : ', API.STMTID
000087 call add_line 'Exception Name       : ', API.XCPNAME
000088
000089 if API.SQLTEXT ~= 'N/A' then do
000090     nlChar = d2c(21)
000091     crChar = d2c(13)
000092     lfChar = d2c(37)
000093
000094     sqlText = translate(API.SQLTEXT, ' ' || nlChar, crChar || lfChar)
000095     sqlTextlen = length(sqlText)
000096     call add_line 'SQL Text Length      : ', sqlTextlen
000097     call add_line 'SQL Text Truncated  : ', API.TRUNCSQL
000098     call add_line 'SQL Text            : ', ''
000099
```

```
.....
HELO *NOT-AVAILABLE*
MAIL FROM:<OPSMVS@*NOT-AVAILABLE*>
RCPT TO:<JIRI.ANDRYS@BROADCOM.COM>
data
Date:      26 Jan 22 06:14:24 EST
To:        JIRI.ANDRYS@BROADCOM.COM
Subject:    DB2 Exception N/A on DT32
Priority:    Urgent
Importance: High
MIME-Version: 1.0
Content-type: text/html; charset= us-ascii
<HTML>
<BODY>
<PRE>
```

```
Exception Text      : Average number of pages written per write I/O is low for B
System              : CA32
DB2 Subsystem Name  : DT32
Data Sharing Group  : DSNDTGP
Data Collector Job  : IDB2DCAD
Data Collector ASID : 0279
SYSVDB2 Version     : 20.0
Exception Type      : SUBSYSTEM
Exception Severity   : CRITICAL
Exception Token      : 00031D9F
Date and Time       : 2022-01-26-06.14.24.817959
Value               : 3
Buffer Pool Subtype : BP00L
Buffer Pool         : BP0
Exception name       : SS000130
</PRE>
</BODY>
</HTML>
```

Exception events reporting in SNMP

Received new Trap message

```
1.3.6.1.2.1.1.3.0 = 1
1.3.6.1.6.3.1.1.4.1.0 = 1.3.6.1.4.1.791.3.9.26.3.0.1
1.3.6.1.6.3.18.1.3.0 = 10.175.84.32
1.3.6.1.6.3.18.1.4.0 = public
1.3.6.1.6.3.1.1.4.3.0 = 1.3.6.1.4.1.791.3.9.26.3
1.3.6.1.4.1.791.3.9.26.3.14 = CA32
1.3.6.1.4.1.791.3.9.26.3.15 = DSNDTGP
1.3.6.1.4.1.791.3.9.26.3.2 = DT32
1.3.6.1.4.1.791.3.9.26.3.16 = 12.1
1.3.6.1.4.1.791.3.9.26.3.17 = IDB2DCAD
1.3.6.1.4.1.791.3.9.26.3.18 = 0279
1.3.6.1.4.1.791.3.9.26.3.19 = 20.0
1.3.6.1.4.1.791.3.9.26.3.10 = SUBSYSTEM
1.3.6.1.4.1.791.3.9.26.3.3 = CRITICAL
1.3.6.1.4.1.791.3.9.26.3.20 = BEGAN
1.3.6.1.4.1.791.3.9.26.3.21 = 00031D9F
1.3.6.1.4.1.791.3.9.26.3.22 = 2022-01-26-07.24.23.210539
1.3.6.1.4.1.791.3.9.26.3.23 = 3
1.3.6.1.4.1.791.3.9.26.3.24 = BP0
1.3.6.1.4.1.791.3.9.26.3.25 = N/A
1.3.6.1.4.1.791.3.9.26.3.7 = N/A
1.3.6.1.4.1.791.3.9.26.3.8 = N/A
1.3.6.1.4.1.791.3.9.26.3.26 = N/A
1.3.6.1.4.1.791.3.9.26.3.5 = N/A
1.3.6.1.4.1.791.3.9.26.3.6 = N/A
1.3.6.1.4.1.791.3.9.26.3.12 = N/A
1.3.6.1.4.1.791.3.9.26.3.13 = N/A
1.3.6.1.4.1.791.3.9.26.3.1 = Average number of pages written per write I/O is low for BP0 Ratio value is 3
1.3.6.1.4.1.791.3.9.26.3.27 = 1
1.3.6.1.4.1.791.3.9.26.3.28 = SS000130
```

```
VIEW      PTIPROD.RD200.PRD.CDBASKL0(CAIDB2MB) - 01.00      Columns 00001 00080
Command ==> Scroll ==> CSR
000220
000221 db2ExceptionConn      OBJECT-TYPE
000222     SYNTAX  DisplayString      (SIZE (8))
000223     ACCESS  read-only
000224     STATUS  mandatory
000225     DESCRIPTION
000226     "The connection name for thread-based exceptions. N/A if not available."
000227     ::= { caiDb2ExceptionGroup 6 }
000228
000229 db2ExceptionCorr      OBJECT-TYPE
000230     SYNTAX  DisplayString      (SIZE (12))
000231     ACCESS  read-only
000232     STATUS  mandatory
000233     DESCRIPTION
000234     "The correlation ID for thread-based exceptions. N/A if not available."
000235     ::= { caiDb2ExceptionGroup 12 }
000236
000237 db2ExceptionAuth      OBJECT-TYPE
000238     SYNTAX  DisplayString      (SIZE (8))
000239     ACCESS  read-only
000240     STATUS  mandatory
000241     DESCRIPTION
000242     "The authorization ID for thread-based exceptions. N/A if not available."
000243     ::= { caiDb2ExceptionGroup 13 }
000244
000245 db2ExceptionText      OBJECT-TYPE
000246     SYNTAX  DisplayString      (SIZE (100))
000247     ACCESS  read-only
000248     STATUS  mandatory
000249     DESCRIPTION
000250     "The exception message text as defined by the user to the exception system."
000251     ::= { caiDb2ExceptionGroup 1 }
000252
000253 db2ExceptionName      OBJECT-TYPE
000254     SYNTAX  DisplayString      (SIZE (8))
000255     ACCESS  read-only
000256     STATUS  mandatory
000257     DESCRIPTION
000258     "The exception name."
000259     ::= { caiDb2ExceptionGroup 28 }
```


Exception events reporting in email notifications



qatest@ca.com
to jiran01

10:02 AM (9 minutes ago) ☆ ↶ ⋮

CA SYSVIEW for DB2 detected following exception

LPAR CA31
Data Sharing Group DSNDTGP
DB2 Subsystem Name DT31
DB2 Release 12.1
Data Collector Job IDB2DCAD
Data Collector ASID 02E3
SYSVDB2 Version 20.0
Exception Type SUBSYSTEM
Exception Severity WARNING
Exception Status BEGAN
Exception Token 00000131
Date and Time 2022-01-26-04.02.17.149993
Value 5
Buffer Pool BP2
Group Buffer Pool N/A
Database name N/A
Pageset N/A
ACE N/A
Plan N/A
Connection N/A
Correlation N/A
Authorization ID N/A
Collection N/A
Package N/A
Package version N/A
Statement ID N/A
SQL text truncated N/A
Exception IQL ID

Exception message Average number of pages written per write I/O is low for BP2 Ratio value is 5

Exception name SS000130

Average number of pages written per write I/O is low for BP0
Ratio value is 3 Inbox x



qatest@ca.com
to jiran01

10:02 AM (2 minutes ago) ☆ ↶ ⋮

CRITICAL DB2 exception on CA32 / DT32

Average number of pages written per write I/O is low for BP0 Ratio value is 3

Exception Name	SS000130
LPAR	CA32
Data Sharing Group	DSNDTGP
DB2 Subsystem	DT32, Rel. 12.1
Data Collector Job	IDB2DCAD (ASID 0279), Rel. 20.0
Exception Type	SUBSYSTEM
Exception Severity	CRITICAL
Exception Status	BEGAN
Exception Token	0000014A
Date and Time	2022-01-26-04.02.38.106585
Buffer Pool/Group BP	BP0 / N/A



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Summary

The SYSVIEW for Db2 exception system has been enhanced with Exception Name. Every exception gets a name value to simplify its future identification and maintenance.

- During the startup, the data collector upgrades the exception file and assigns a unique exception name to every existing exception definition.

The product reports an exception name in the following ways:

- In the online interface display, when the exception is open to browse or edit.
- A new variable &XCPNAME can be used in the exception message text.
- A new OPS/MVS variable API.XCPNAME can be used in OPS/MVS REXX scripts.
- A new &XCPNAME can be used in the email system. The default plain email and email HTML template NSIEHTML both include the name.
- In the SNMP trap. A new db2ExceptionName field in the CAIDB2MB MiB file maps the name.
- In a new IQL field EXP-NAME in the IDB2-EXCEPTIONS (1042) record.

Broadcom recommends using the Alternate Index to enforce uniqueness of exception names. This will better position you to use future enhancements as they become available.

Please Provide Feedback...

PTF: LU04287

Rabah Beggar
rabah.beggar@broadcom.com





Detector: zIIP Support for Collection Externalization (LU03709)

Andrew Badgley

andrew.badgley@broadcom.com

| zIIP Support for Collection Externalization

- Detector now uses a zIIP processor to externalize collected standard activity data to a data store when a zIIP processor is available. The use of zIIP processors for this CPU-intensive processing can improve performance and can reduce costs.
- This change is automatic after stopping and restarting the collection.
- If zIIP processors are not available then the offload will use the GPUs.



Detector: Report or Unload Metrics by SSID for a Data Sharing Group

(LU04586)
Community Idea

Andrew Badgley

andrew.badgley@broadcom.com

Report or Unload Metrics by SSID for a Data Sharing Group

- Customers asked for the ability to Report or Unload metrics at the SSID level w/o having to have a separate PDTBATCH job for each member of a data sharing group
- When you generate a report or you unload data for a data sharing group in Detector, you can now report or unload the metrics by member (SSID).
- New PDTBATCH parameter DSG_MEMBER=Y|N
- Using a single PDTBATCH job to generate separate metrics for each member saves time and system resources.
- No need to create another PDTBATCH job when a new member is added to a data sharing group.

Report w/ DSG_MEMBER=N (default)

PDT 20.0		CA-Detector		Page 1		
GROUP-DSNDHG		Plan Activity Report		2022/01/27		
Interval Date => 2022/01/20		Interval Time => 15:00:08		Elapsed Time => 00:22		
Total CPU => 00:00.0015		Total Time => 00:00.00				
Type	Plan/Prog-Collid/Sect-Stmt	TimePct	CPUPct	Getpage	SQL Calls	SyncRd
PLAN	RAPBD200	53.40%	73.47%	10	10	0
PKGE	PRA#@HCA-RAPBD200B4	19.48%	33.86%	6	6	0
SQL	001-00429-SELECT	14.29%	24.66%	6	2	0
SQL	002-00443-SELECT	2.44%	4.37%	0	2	0
SQL	003-00461-SELECT	2.70%	4.82%	0	2	0
PKGE	PTADRVAC-AUTHD200_COM	33.92%	39.60%	4	4	0
SQL	002-00586-SELECT	26.35%	26.52%	4	2	0
SQL	000-00595-COMMIT	7.52%	13.00%	0	2	0
PLAN	RAPBQ200	46.59%	26.46%	3	3	0
PKGE	PRA#@HCA-RAPBQ200B4	46.59%	26.46%	3	3	0
SQL	001-00429-SELECT	43.35%	20.60%	3	1	0
SQL	002-00443-SELECT	1.36%	2.44%	0	1	0
SQL	003-00461-SELECT	1.83%	3.28%	0	1	0

Report w/ DSG_MEMBER=Y

```
PDT 20.0
DB2-DH2G
```

CA-Detector
Plan Activity Report

Page 2
2022/01/28

Interval Date => 2022/01/20 Interval Time => 14:00:02 Elapsed Time => 00:20
Total CPU => 00:00.3653 Total Time => 00:00.61

Type	Plan/Prog-Collid/Sect-Stmt	TimePct	CPUPct	Getpage	SQL Calls	SyncRd
PLAN	CSQ5K910	4.40%	2.01%	212	16	0
PKGE	CSQ5K910-CSQ5K910	4.40%	2.01%	212	16	0
SQL	002-00869-FETCH	.00%	.00%	0	4	0
SQL	002-00999-OPEN	4.04%	1.99%	212	4	0
SQL	002-01011-CLOSE	.00%	.00%	0	4	0
SQL	000-01119-ROLLBACK	.35%	.01%	0	4	0

```
PDT 20.0
DB2-DH3G
```

CA-Detector
Plan Activity Report

Page 3
2022/01/28

Interval Date => 2022/01/20 Interval Time => 14:00:03 Elapsed Time => 00:20
Total CPU => 00:00.1651 Total Time => 00:01.28

Type	Plan/Prog-Collid/Sect-Stmt	TimePct	CPUPct	Getpage	SQL Calls	SyncRd
PLAN	CSQ5K910	7.43%	9.13%	212	16	0
PKGE	CSQ5K910-CSQ5K910	7.43%	9.13%	212	16	0
SQL	002-00869-FETCH	.02%	.05%	0	4	0
SQL	002-00999-OPEN	7.33%	8.96%	212	4	0
SQL	002-01011-CLOSE	.00%	.03%	0	4	0
SQL	000-01119-ROLLBACK	.07%	.08%	0	4	0

Unload w/ DSG_MEMBER=N (default)

```
STAN. . . . ***** 2022-01-20-14.00.02.
STAN. . . . ***** 2022-01-20-14.00.02.
STAN. . . . ***** 2022-01-20-14.00.02.
STAN. . . . ***** 2022-01-20-14.00.02.
STAN. . . . ***** 2022-01-20-14.00.02.
STAN. . . . DH0G. . . . 2022-01-20-14.00.02.
STAN. . . . DH0G. . . . 2022-01-20-14.00.02.
STAN. . . . DH0G. . . . 2022-01-20-14.00.02.
STAN. . . . DH0G. . . . 2022-01-20-14.00.02.
STAN. . . . DH0G. . . . 2022-01-20-14.00.02.
STAN. . . . DH0G. . . . 2022-01-20-14.00.02.
STAN. . . . DH2G. . . . 2022-01-20-14.00.02.
STAN. . . . DH2G. . . . 2022-01-20-14.00.02.
STAN. . . . DH2G. . . . 2022-01-20-14.00.02.
```


Unload w/ DSG_MEMBER=Y

[illegible]



Plan Analyzer: REST Service Package Support for Bind Services (LU04484)

Andrew Badgley

andrew.badgley@broadcom.com

REST Service Package Support for Bind Services

- Use Plan Analyzer to create REST API packages, copy them to other subsystems, rebind them, and free them.
 - A new primary command, ADDREST, to create a REST service package.
 - The primary commands COPYPACK, REBINDPACK, and FREEPACK have been upgraded to work with REST service packages.
 - A new package utility line command, BC (BIND COPY), copies a DBRM or REST service package locally or to another system.
 - The Package Rebind Parameters report has been upgraded to work with REST service packages.
 - The utility line commands R (REBIND PACKAGE), RO (REBIND PACKAGE OPTIONS), F (FREE PACKAGE), and FA (FREE ALL PACKAGE VERSIONS) have been upgraded to work with REST service packages.

Create a REST Service walkthrough

To create a native REST service:

1. Select Plan/Package Utilities from the product Main Menu and press Enter.
2. Type ADDREST in the command line and press Enter. This command can be specified from any Plan Analyzer panel. When you specify this command here, you can see the new REST package in the catalog after the bind has completed. The PPA BIND SERVICE Options panel appears.
3. Complete the following fields:

...

Please see our product documentation for the [full walkthrough](#).

Please Provide Feedback...

PTFs: LU03709, LU04586, LU04484,
LU03926

Andrew Badgley
andrew.badgley@broadcom.com





RC/Query: Generate CREATE OR REPLACE PROCEDURE DDL (LU03926)

Srinivas Adupa

Srinivas.Adupa@Broadcom.com

Overview

Problem statement:

Currently RC/Query does not generate DDL of procedures that are created with CREATE OR REPLACE (along with newly added clauses). Many customers have shown interest in having this functionality to generate the new DDL for Stored procedures.

Solution:

So, we have enhanced RC/Query

- to generate DDL for the procedures that are created with CREATE OR REPLACE
- additional clauses (new clause SPECIFIC)
- formatting improvements
 - statements in the body of procedure will be formatted. This includes SELECT, INSERT, UPDATE or DELETE

RC/Query: CREATE OR REPLACE PROCEDURE DDL

- CREATE OR REPLACE PROCEDURE DDL
- SPECIFIC clause
- Formatted statement (body of procedure)

```
CREATE OR REPLACE PROCEDURE ADUSR01.NEW_PRO1
(
  IN C1 INTEGER
  ,
  OUT C2 INTEGER
)
VERSION V1
- - - - - 32 Line(s) not Displayed
SPECIFIC NEW_PRO1
BEGIN
INSERT INTO TGCRT1.TGTABLE1(COL1, COL2)
SELECT C1, C2
FROM SRCRT1.SRTABLE1
WHERE C1 = 100;
END;
```

Statement provided while creating the procedure: (Unformatted):

```
INSERT INTO TGCRT1.TGTABLE1(COL1,COL2) SELECT C1, C2 FROM SRCRT1.SRTABLE1
WHERE C1=100;
```


Please Provide Feedback...

PTFs:
LU03926

Srinivas Adupa
srinivas.adupa@broadcom.com





RC/Query: List AOTs (Accelerator Only Tables) in reports (LU04657)

Srinivas Adupa

Srinivas.Adupa@Broadcom.com

Overview

Problem statement:

Currently AOTs (Accelerator Only Tables) are listed only in T-AC report. Users are requesting to include

- a column in T-AC report to indicate whether a table is AOT or not
- AOTs in other required reports (wherever Tables are shown)

Solution:

So, we have enhanced RC/Query

- by including a new field in T-AC report (will have Yes or No values)
- by including AOTs in other reports (A-L, BP-T, DB-D, DB-T, SG-D, SG-T, T-A, T-C, T-D, T-L, TS-T, T-UA, T-V, VC-T, T-O, T-DI) -> 16 reports in total

Supporting AOTs in RC/Query reports:

Listing AOTs in T-AC and T-L reports

T-AC report screenshot (this is partial report only)

```
RQTAC 20.0 ----- RC/Q Table Accelerator list ----- 2022/02/11 11:11
COMMAND ==>
SCROLL ==> CSR

DB2 Object ==> T Option ==> AC Where => N
Table Name ==> * > Creator ==> PATLO01 >
AccName ==> * > AccKeys ==> N >
Loc: LOCAL ----- SSID: DT31 -----ADUSR01 - LINE 1 OF 3 >
CMD TABLE NAME CREATOR ACCEL-NAME AOT DIST-KEY ORG-KEY
EMP PATLO01 DTGP7551 NO
TEST_ACCEL PATLO01 DTGP7551 NO
TEST_AOT2 PATLO01 DTGP7551 YES
***** BOTTOM OF DATA *****
```

T-L report screenshot (this is partial report only)

```
DB2 Object ==> T Option ==> L Where => N
Table Name ==> TEST_AOT2 > Creator ==> PATLO01 >
Qualifier ==> * > N/A ==> * >
Loc: LOCAL ----- SSID: DT31 -----ADUSR01 - LINE 1 OF 1 >
CMD TABLE NAME CREATOR DATABASE TBLSPACE COL_CNT NUMBER OF ROWS
TEST_AOT2 PATLO01 PATDBACL TESTRAOT 1 N/A
***** BOTTOM OF DATA *****
```

Supporting AOTs in RC/Query reports:

Listing some more reports

T-D report screenshot (this is partial report only)

```
PT029I - USE PF10/11 FOR UP/DOWN WITHIN DATA ITEM
DB2 Object ==> T          Option ==> D      Where => N
Table Name ==> TEST_AOT2  > Creator ==> PATLO01      >
Qualifier ==> *          > N/A      ==> *          >
Loc: LOCAL ----- SSID: DT31 -----ADUSR01 -          FRAME 1 OF 1
NUMBER OF ROWS      : N/A          TABLE TYPE: AOT
NUMBER OF CHECKS    : 0          REL CREATED: DB2v12
```

Other reports that are enhanced by listing AOTs:

A-L, BP-T, DB-D, DB-T, SG-D, SG-T, T-A, T-C, T-D, T-L, TS-T, T-UA, T-V, VC-T, T-O, T-DI) -> 16 reports in total

Please Provide Feedback...

PTFs:
LU04657

Srinivas Adupa
srinivas.adupa@broadcom.com





In Closing...

When is the next Community Update call?

Our next call will be March 14th, 2022

Did you miss our last call (in December)?

The replay is available [here](#).

CA Db2 Tools 20.0 Validation Project

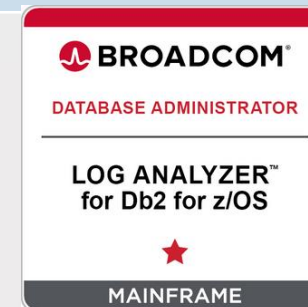
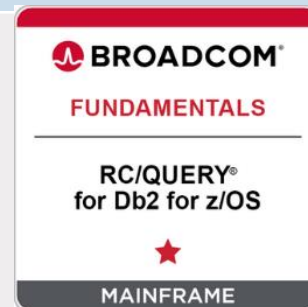
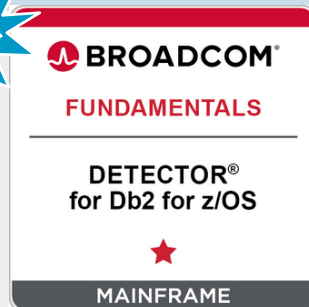
<https://validate.broadcom.com/key/DB2Tools200>

Our next call will be on March 15th, 2022

Check out our **new** education offerings

*As an **active maintenance** customer, you can consume our web-based training courses and digital badges at **no cost** to you*

Course Code	Title
06PDT20010	Detector® for Db2 for z/OS: Getting Started 200
06PDT20020	Detector® for Db2 for z/OS: Standard Collection 200
06PDT20030	Detector® for Db2 for z/OS: Exception and Error Collection 200
06PDT20040	Detector® for Db2 for z/OS and Subsystem Analyzer for Db2 for z/OS: Batch Reporting 200
06PSA20010	Subsystem Analyzer for Db2 for z/OS: Overview 200



Resources

- [Accessing Learning@Broadcom: Quick Reference Guide](#)
- [Course Catalog](#)

Learning Paths

- [Administration Suite for Db2](#)
- [Recovery Suite for Db2](#)
- [Performance Suite for Db2](#)
- [Utility Suite for Db2](#)



Thank You