

Free TestBase SQLCODE -805 Tool

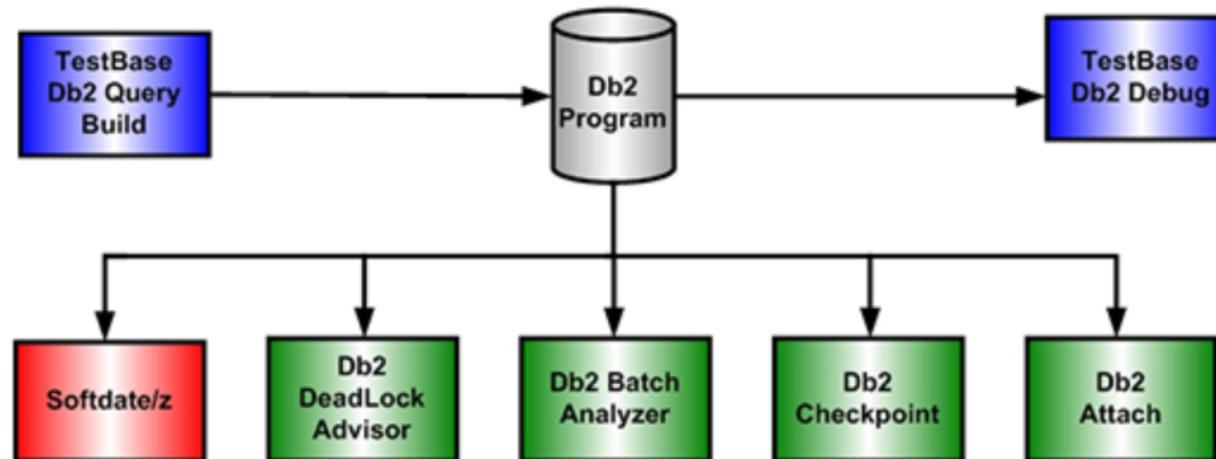
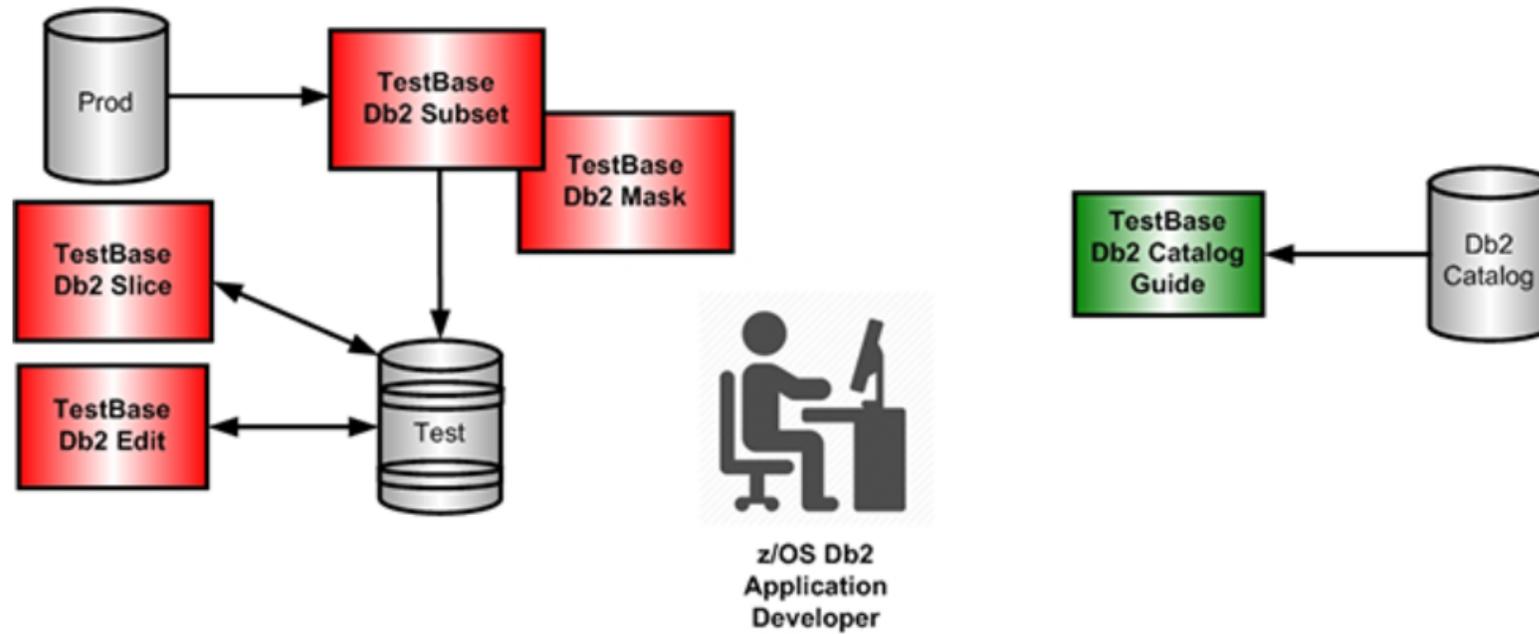
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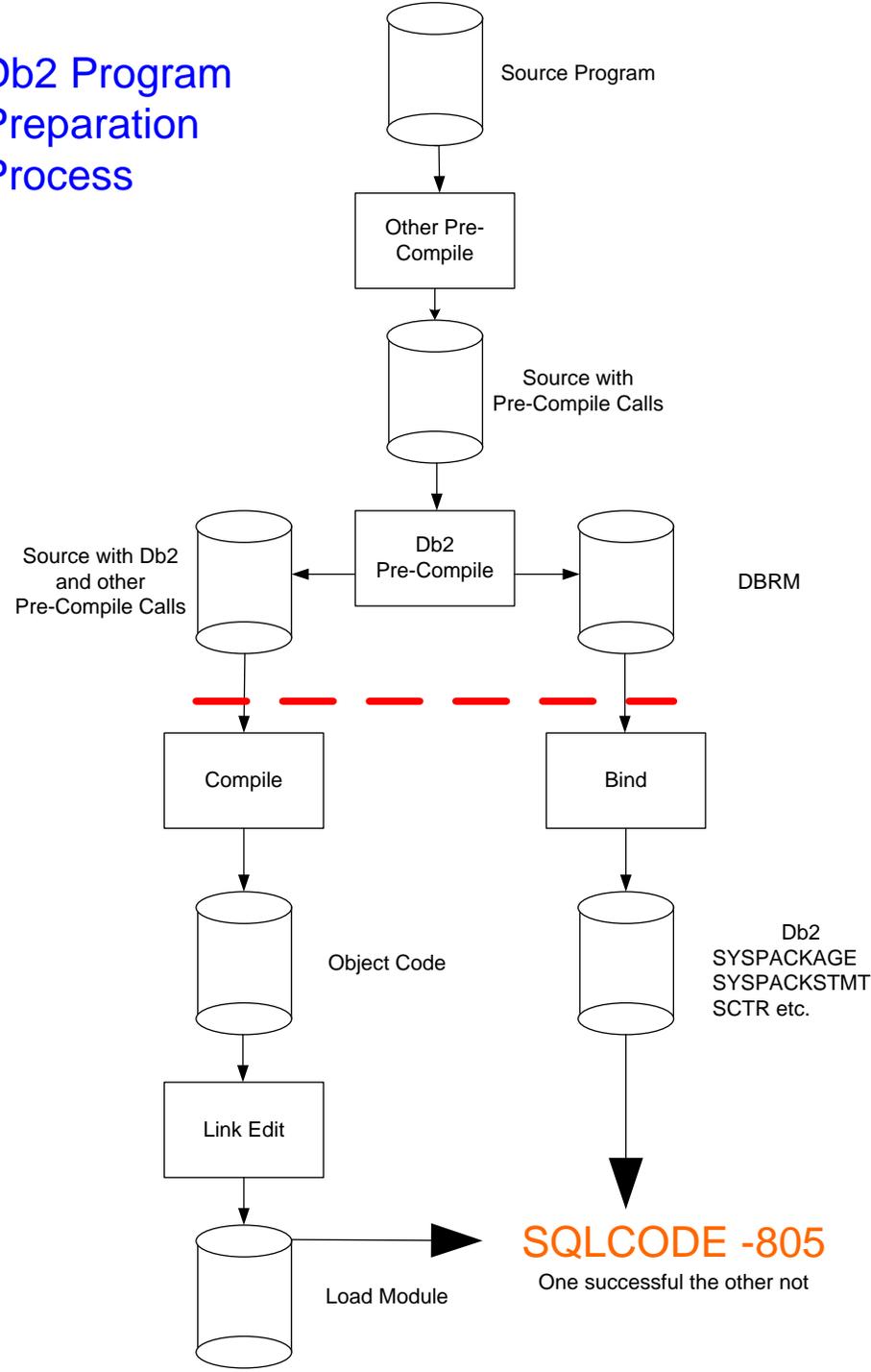
Neal Lozins

SoftBase Db2 for z/OS Product Manager

SoftBase Db2 Products for z/OS



Db2 Program Preparation Process



Program Preparation Errors

Many SQLCODE -805 errors are caused by one leg of this process being successful and the other not being successful

Execution time Errors

Other SQLCODE -805 errors involve the execution environment - the concatenation order of the load libraries or the choice of PLAN or the value of CURRENT PACKAGESET special register at execution time.

PACKAGE or PLAN BIND errors

Still other SQLCODE -805 errors involve the Bind process itself - wrong COLLECTION or the COLLECTION is not in the PLAN.

Possible SQLCODE -805 issues

- ❑ Wrong load library or library concatenation
- ❑ DBRM was created and bound but the object was not linked
- ❑ Object was linked but DBRM was not bound
- ❑ Wrong PLAN name
- ❑ Collection not part of PLAN or wrong collection
- ❑ Wrong value of CURRENT PACKAGESET special register

Db2 Consistency Token

At pre-compile time, the Db2 Pre-Compiler places a consistency token in both the host application code for compilation and the DBRM that will be bound. At execution time, if these tokens do not match, DB2 gives an SQLCODE -805.

The consistency token is in both the load module and the Db2 catalog and must match.

DSNTIAR - get DSNT408I message

How do I get more information than just the SQLCODE?

DSNTIAR is one of several methods to get a more complete message. For example, calling DSNTIAR to format a -805 will produce a message like:

```
DBRM OR PACKAGE NAME location-name.collection-id.dbrm-name.consistency-token NOT FOUND IN  
PLAN plan-name. REASON reason-code
```

```
DSNT408I SQLCODE = -805, ERROR: DBRM OR PACKAGE NAME DBCGLOC..SETSQLI1.1A92A7511F5DA818  
NOT FOUND IN PLAN TEST805P. REASON 03
```

In the message, if CURRENT PACKAGESET is set there is a collection name.

SQLCODE -805 Reason Codes

https://www.ibm.com/support/knowledgecenter/SSEPEK/pdf/db2z_12_codesbook.pdf?view=kc

- 01 - DBRM name was not found in the member list of the plan and there is no package list for the plan.
- 02 - DBRM name dbrm-name did not match an entry in the member list or the package list.
 - The collection-id in the package list was not correct when the application plan was bound.
 - The location-name in the CURRENT SERVER special register for the BIND subcommand was not correct when the application plan was bound.
 - The CURRENT PACKAGESET special register was not set correctly by the application. Be sure to use the correct encoding scheme
 - The application was not connected to the proper location.
- 03 - DBRM name matched one or more entries in the package list and the search of those entries did not find the package. Any of the conditions for reason code 02 plus:
 - A package with the same consistency token as that of the application program was not found.
 - The incorrect version of the application program is being executed.
- 04 - Package does not exist at the remote site

Note: IBM Includes some SQL to execute. Some of the SQL has less than desirable access paths (index scans).

Manual Steps to verify consistency tokens

1. Query the Db2 catalog for the possible consistency tokens for the package

```
SELECT
    SUBSTR(L.COLLID,1,8) AS COLLID
  , SUBSTR(L.NAME,1,1) AS PKG_L
  , SUBSTR(P.NAME,1,8) AS PKG_NAME
  , HEX(P.CONTOKEN) AS CONTOKEN
  , SUBSTR(P.PDSNAME,1,25) AS PDSNAME
  , P.BINDTIME
FROM SYSIBM.SYSPACKLIST L
  , SYSIBM.SYSPACKAGE P
WHERE L.PLANNAME = 'TEST805P'
  AND L.COLLID = P.COLLID
  AND P.NAME = 'SETSQLI1'
  AND (L.NAME = '*'
  OR L.NAME = P.NAME)
ORDER BY L.SEQNO, P.NAME , P.CONTOKEN
```

```
-----+-----+-----+-----+-----+-----+-----+
COLLID   PKG_L  PKG_NAME  CONTOKEN                PDSNAME                BINDTIME
-----+-----+-----+-----+-----+-----+-----+
TEST805A *      SETSQLI1  1A92367809728850      TST.G610.TDGF.LIB.DBRM12  2018-07-
TEST805B *      SETSQLI1  1A92367809728850      TST.G610.TDGF.LIB.DBRM12  2018-07-
```

Manual Steps to verify token (continued)

2. Find the consistency token in the DBRM - browse the DBRM library from above in hex. The first line positions 25 thru 32 has the consistency token:

```
VIEW          TST.G610.TDGF.LIB.DBRM12 (SETSQLI1) -
Command ==>
***** ***** Top of Dat
=COLS> -----1-----2-----3-----4
000001 DBRM    µCSBI      SETSQLI1 kxé )y    3 °
          CCDD000ACECC4444ECEEDDCF19A515A100F29000
          429400003229000025328391A271FD8870320200
```

Manual Steps to verify token (continued)

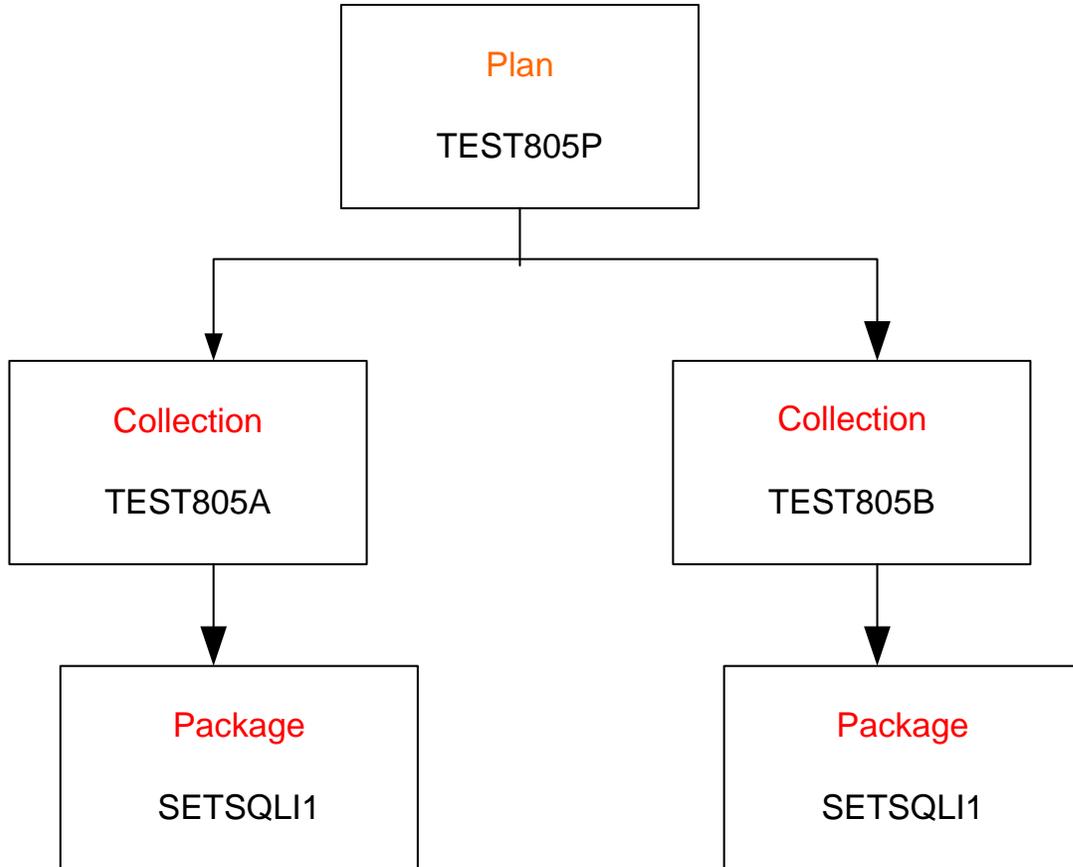
3. Find the consistency token in the load library by browsing in hex:

Find x'**1A92A7511F5DA818**' *

If they are found you have a match.

*Note - in early versions of Db2 you had to swap the two groups of
of 4 bytes '**1F5DA8181A92A751**'

Demo



DSN SYSTEM(DBCG)

BIND PACKAGE (TEST805A) -	BIND PACKAGE (TEST805B) -
OWNER (S3DBA) -	OWNER (S3DBA) -
QUALIFIER (TDGF610A) -	QUALIFIER (TDGF610B) -
MEMBER (SETSQLI1) -	MEMBER (SETSQLI1) -
ACTION (REPLACE) -	ACTION (REPLACE) -
CURRENTDATA (NO) -	CURRENTDATA (NO) -
DYNAMICRULES (RUN) -	DYNAMICRULES (RUN) -
EXPLAIN (NO) -	EXPLAIN (NO) -
ISOLATION (CS) -	ISOLATION (CS) -
KEEPDYNAMIC (N) -	KEEPDYNAMIC (N) -
NOREOPT (VARS) -	NOREOPT (VARS) -
RELEASE (COMMIT) -	RELEASE (COMMIT) -
SQLERROR (NOPACKAGE) -	SQLERROR (NOPACKAGE) -
ENCODING (EBCDIC) -	ENCODING (EBCDIC) -
VALIDATE (BIND) -	VALIDATE (BIND) -

```

BIND PLAN (TEST805P) -
OWNER (CSBI ) -
ISOLATION (CS ) -
RELEASE (COMMIT) -
VALIDATE (BIND ) -
KEEPDYNAMIC (YES ) -
ENCODING (EBCDIC) -
RETAIN -
PKLIST (*.TEST805A.*,*.TEST805B.*)
  
```

From SDSF enter command CG DBCG CT

Catalog Guide Command, Db2 Subsystem, Consistency Token Cursor on plan name TEST805P

```
  Display  Filter  View  Print  Options  Search  Help
-----
SDSF OUTPUT DISPLAY CSBIT      JOB03535  DSID    101 LINE 0          COLUMNS 27- 106
COMMAND INPUT ==> cg dbcg ct          SCROLL ==> HALF
***** TOP OF DATA *****
SETSQLI1-0000
DBCG
DB2
000000000
TEST805P
DBCGLOC
DSN12015
-000000805
SETSQLI1
0000
DSNT408I  SQLCODE = -805, ERROR:  DBRM OR PACKAGE NAME DBCGLOC..SETSQLI1.1-
          A92A7511F5DA818 NOT FOUND IN PLAN TEST805P. REASON 03
DSNT418I  SQLSTATE      = 51002 SQLSTATE RETURN CODE
DSNT415I  SQLERRP      = DSNXEPM SQL PROCEDURE DETECTING ERROR
***** BOTTOM OF DATA *****
```

Verify you have the entire consistency token and enter your load library

```
TestBase SQLCODE 805 Tool
Command ==>
Db2 Subsystem ==> DBCG
Message Items:
Db2 Location . . . ==> DBCGLOC
Db2 Plan . . . ==> TEST805P
Collid (Optional). ==>
Package Name . . . ==> SETSQLI1
Consistency Token. ==> 1A92A7511F5DA818
Application Steplib:
Load Library . . . ==> 'TST.G610.TDGF.LIB.LOAD12'
(c) Copyright 2018 Candescant SoftBase LLC
Version 6.1 2018-06-21
```

```

TestBase SQLCODE 805 Tool Results
Command ==>
Message Items:
  Db2 Location . . . ==> DBCGLOC
  Db2 Plan . . . . . ==> TEST805P
  Package Name . . . ==> SETSQLI1
  Consistency Token. ==> 1A92A7511F5DA818 * - Match
Db2 Catalog Items:
  Line Commands: / - List Commands S - Select
  Collid          Contoken          Op Version          Timestamp
-----
TEST805A         1A92367809728850 Y                    2018-07-05-10.54.41.713174
Qual: TDGF610A   DBRMLIB: TST.G610.TDGF.LIB.DBRM12
TEST805B         1A92367809728850 Y                    2018-07-05-10.54.41.769088
Qual: TDGF610B   DBRMLIB: TST.G610.TDGF.LIB.DBRM12

```

```

Here is list of packages but none was found with
contoken: 1A92A7511F5DA818
Possible problems: Object was link-edited but dbrm was not bound
Steplib concatenation is wrong

```

If you have the full Catalog Guide - the S command and / will bring up additional capabilities.

Links to materials

Download Link:

https://www.softbase.com/testbase_sqlcode_805_tool.php

Video Link:

https://www.softbase.com/download_portal.php?xfile=G610CTDEMO

Contact Us or Download a
Free Copy of our SQLCODE -805 tool
Part of TestBase Db2 Catalog Guide

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