- **-805** DBRM OR PACKAGE NAME location-name.collection-id.dbrm-name.consistency -token NOT FOUND IN PLAN plan-name. REASON reason. Suggestion: Ensure COLLECTION name is in DB2 PLAN. Recompile and BIND the DB2 program. Verify correct LOAD library is being used.
- **-811** THE RESULT OF AN EMBEDDED SELECT STATEMENT OR A SUBSELECT IN THE SET CLAUSE OF AN UPDATE STATEMENT IS A TABLE OF MORE THAN ONE ROW, OR THE RESULT OF A SUBQUERY OF A BASIC PREDICATE IS MORE THAN ONE VALUE. Suggestion: -811 is often detected after program check for DB2 data existence. Consider using new DB2 V8 FETCH FIRST ROW ONLY feature instead.
- **-818** THE PRECOMPILER-GENERATED TIMESTAMP x IN THE LOAD MODULE IS DIFFERENT FROM THE BIND TIMESTAMP y BUILT FROM THE DBRM z. Suggestion: Recompile and BIND the DB2 program. Verify correct LOAD library is being used.
- **-904** UNSUCCESSFUL EXECUTION CAUSED BY AN UNAVAILABLE RESOURCE. REASON reason-code, TYPE OF RESOURCE resource-type, AND RESOURCE NAME resource-name. Suggestion: -904 is usually caused because a database utility job has started the desired DB2 object in utility mode. Check DB2 Master Log for more details on the resource name – contact DBA.
- **-911** THE CURRENT UNIT OF WORK HAS BEEN ROLLED BACK DUE TO DEADLOCK OR TIMEOUT. REASON reason-code, TYPE OF RESOURCE resource-type, AND RESOURCE NAME resource-name. Suggestion: Review DB2 Master Log to find process holding DB2 locks. Consider adding additional COMMITs to program holding the DB2 resource.
- **-913** UNSUCCESSFUL EXECUTION CAUSED BY DEADLOCK OR TIMEOUT. REASON CODE reason-code, TYPE OF RESOURCE resource-type, AND RESOURCE NAME resource-name. Suggestion: Review DB2 Master Log to find process holding DB2 locks. Consider adding additional COMMITs to program holding the DB2 resource.
- **-922** AUTHORIZATION FAILURE: error-type ERROR. REASON reason-code. Suggestion: Connection to DB2 has failed due authority for USER or PLAN. Contact DBA to check DB2 authorizations.
- **-927** THE LANGUAGE INTERFACE (LI) WAS CALLED WHEN THE CONNECTING ENVIRONMENT WAS NOT ESTABLISHED. THE PROGRAM SHOULD BE INVOKED UNDER THE DSN COMMAND.

More DB2 SQL Error Code Resources

- IBM DB2 Version 8 for z/OS Messages & Codes: http://publib.boulder.ibm.com/cgi-bin/bookmgr/BOOKS/dsnmcj10/CCONTENTS

INSTANT EXPERT: SQL ERROR CODES

Compliments of SoftBase Systems, Inc.
www.softbase.com 1-800-669-7076

DB2 UDB Version 8 for z/OS

Introduction

SQL return codes provided by DB2 UDB for OS/390 and z/OS can be confusing and often reference manuals are not available or close at hand when you really need them. This Instant Expert Reference Card will review SQL return code processing and common SQL error conditions you may encounter in your daily work with DB2.

Retrieving SQL Return Code Information & Messages Into Your Programs

- COBOL programs executing SQL statements communicate with DB2 via a Working Storage area called the SQL Communications Area (SQLCA).
- When DB2 executes SQL statements, it returns the results of the operation into the SQLCODE and SQLSTATE fields in the SQLCA. SQLCODE provides key information about the success or failure of SQL statement execution.
- If the SQLWARNO field in the SQLCA contains 'W', DB2 has set at least one of the SQL warning flags (SQLWARN1 through SQLWARNA). These flags provide additional info about execution of specific types of SQL.
- Prior to DB2 V8, COBOL programs could call a subroutine called DSNTIAR that would convert a SQLCODE in the SQLCA into more a detailed text message with diagnostics about the return code.
- (DB2 V8) New with DB2 V8, COBOL programs can now execute a GET DIAGNOSTICS statement that will return all previous SQLCA values and provide additional information about new DB2 V8 extended object names and new SQL functions.
- (DB2 V8) The new GET DIAGNOSTICS function replaces existing SQLCA processing now found in most DB2 COBOL programs. GET DIAGNOSTICS also passes a text message about SQLCODE directly to programs.

SQLCODE Overview

- If SQLCODE = 0, execution was successful.
- If SQLCODE > 0, execution was successful with a warning.
- If SQLCODE < 0, execution was not successful.

- If SQLCODE = 100, "no data" was found. For example, a FETCH statement returned no data because the cursor was positioned after the last row of the result table.
- (DB2 V8) New with Version 8, when DB2 processes a multiple-row FETCH statement, the contents of SQLCODE is set to +100 if the last row in the table has been returned with the set of rows.

SQLCODE - Successful SQL Execution

- **+100** ROW NOT FOUND FOR FETCH, UPDATE OR DELETE, OR THE RESULT OF A QUERY IS AN EMPTY TABLE. Suggestion: If expecting data, verify WHERE clause for accuracy and completeness.
- **+117** THE NUMBER OF INSERT VALUES IS NOT THE SAME AS THE NUMBER OF OBJECT COLUMNS. Suggestion: Correct SQL statement to provide only one value for each column in the table.
- **+231** (DB2 V8) CURRENT POSITION OF CURSOR cursor-name IS NOT VALID FOR FETCH OF THE CURRENT ROW. Suggestion: Be certain to FETCH to position on a row after opening a cursor. If cursor is declared SENSITIVE STATIC SCROLL, the row may be a hole, from which no values can be fetched.
- **+304** A VALUE WITH DATA TYPE data-type1 CANNOT BE ASSIGNED TO A HOST VARIABLE BECAUSE THE VALUE IS NOT WITHIN THE RANGE OF THE HOST VARIABLE IN POSITION position-number WITH DATA TYPE data-type2. Suggestion: Verify DCLGEN host variable definitions are current with DB2 catalog table/view attributes.
- **+347** (DB2 V8) THE RECURSIVE COMMON TABLE EXPRESSION name MAY CONTAIN AN INFINITE LOOP. Suggestion: Verify predicate in the SQL WHERE clause of the form "counter_col < constant" or "counter_col < :hostvar.
- **+802** EXCEPTION ERROR exception-type HAS OCCURRED DURING operation-type OPERATION ON data-type DATA, POSITION position-number. Suggestion: Check arithmetic operation for divide by zero or result to exceed size of host variable.

SQLCODE - Unsuccessful SQL Execution

- **-117** THE NUMBER OF VALUES ASSIGNED IS NOT THE SAME AS THE NUMBER OF SPECIFIED OR IMPLIED COLUMNS. Suggestion: Provide one value for each column in the table.
- **-150** (DB2 V8) THE OBJECT OF THE INSERT, DELETE, OR UPDATE STATEMENT IS A VIEW, SYSTEM-MAINTAINED MATERIALIZED QUERY TABLE, OR TRANSITION TABLE FOR WHICH THE REQUESTED OPERATION IS NOT PERMITTED. Suggestion: Be certain to specify base DB2 table/view names for INSERT statements.
- **-180** THE DATE, TIME, OR TIMESTAMP VALUE value IS INVALID. Suggestion: Verify the data value is in the correct range and value type.
- **-181** THE STRING REPRESENTATION OF A DATETIME VALUE IS NOT A VALID DATETIME VALUE. Suggestion: Verify data format with the SQL Reference Guide.
- **-204** name IS AN UNDEFINED NAME. Suggestion: Correct DB2 CREATOR or OBJECT NAMEs located in SQL statements.
- **-227** (DB2 V8) FETCH fetch-orientation IS NOT ALLOWED, BECAUSE CURSOR cursor-name HAS AN UNKNOWN POSITION (sqlcode,sqlstate). Suggestion: CLOSE and re-OPEN the cursor; For scrollable use (FIRST, LAST, BEFORE, AFTER, or ABSOLUTE) to establish valid position.
- **-305** THE NULL VALUE CANNOT BE ASSIGNED TO OUTPUT HOST VARIABLE NUMBER position-number BECAUSE NO INDICATOR VARIABLE IS SPECIFIED. Suggestion: Add null indicator variable to SELECT statement in the format of "column:hostvarind"
- **-501** THE CURSOR IDENTIFIED IN A FETCH OR CLOSE STATEMENT IS NOT OPEN. Suggestion: Correct logic in application program to OPEN the cursor before the FETCH or CLOSE statement.
- **-502** THE CURSOR IDENTIFIED IN AN OPEN STATEMENT IS ALREADY OPEN. Suggestion: Correct logic in application program to CLOSE the CURSOR before the OPEN statement.
- **-503** A COLUMN CANNOT BE UPDATED BECAUSE IT IS NOT IDENTIFIED IN THE UPDATE CLAUSE OF THE SELECT STATEMENT OF THE CURSOR. Suggestion: Use FOR UPDATE statement in your cursor.
- **-530** THE INSERT OR UPDATE VALUE OF FOREIGN KEY constraint-name IS INVALID. Suggestion: Ensure that INSERT row for DB2 PARENT table is completed before INSERT row in CHILD table.
- **-532** THE RELATIONSHIP constraint-name RESTRICTS THE DELETION OF ROW WITH RID X'rid-number'. Suggestion: Change the program to DELETE CHILD table row before DELETE of row on PARENT table.
- **-551** auth-id DOES NOT HAVE THE PRIVILEGE TO PERFORM OPERATION operation ON OBJECT object-name. Suggestion: Contact the support DBA to GRANT the needed privilege.
- **-803** AN INSERTED OR UPDATED VALUE IS INVALID BECAUSE THE INDEX IN INDEX SPACE indexspace-name CONSTRAINS COLUMNS OF THE TABLE SO NO TWO ROWS CAN CONTAIN DUPLICATE VALUES IN THOSE COLUMNS. RID OF EXISTING ROW IS Xrid. Suggestion: Verify DB2 INDEX and, if needed, change the statement to an UPDATE.