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SQL0803N SQLSTATE=23505 or SQLCODE=-803 SQLSTATE=23505 error in DB2 LUW indicates you are trying to Insert, Update row which violates Primary Key, Unique Constraint or Unique index on a table. This error on a table for which Primary Key column is IDENTIY column with GENERATED BY DEFAULT or GENERATED ALWAYS seems strange, since DB2 itself take care of generating unique value for IDENTITY column. You might get SQL0803N error when running insert from CLI and in application error log you might get see error SQLCODE=-803 SQLSTATE=23505.This issue happens when IDENTITY column generate value which is already present in table. You can observer this anomaly in below scenarios: Scenario 1: After performing Load with IDENTITYOVERRIDE modifier.When you load a table with IDENTITYOVERRIDE modifier and max value for IDENTITY column in load file is more than max value for IDENTITY column in target table, you might face this issue when new inserts will be performed after load. This happens as DB2 generates IDENTITY value which is already present in table since internal sequence for IDENITY was not updated after load. Scenario 2: Table altered to add IDENTITY clause which already has data.If you alter a table to add IDENTITY clause which already has data with default option, after load during insert you might face this issue. In this case also DB2 generates IDENTITY value which is already present in table since internal sequence for IDENTITY will generate value from 1 by default which might already be present in table.Solution:To fix this issue you need to restart the internal sequence of IDENTITY column with value greater then sum of max value and CACHE value of IDENTITY column.In this example I am referring to EMP table with below structureCREATE TABLE "DB2INST2"."EMP" ("ID" BIGINT NOT NULL GENERATED ALWAYS AS IDENTITY (START WITH +1 INCREMENT BY +1 MINVALUE +1 MAXVALUE +9223372036854775807 NO CYCLE CACHE 20 NO ORDER) , "NAME" VARCHAR(20 OCTETS));Check max value for IDENTITY columndb2 "SELECT MAX(ID) FROM EMP"Calculate restart value for internal sequence, in this case since 125357 is max value for ID column and CACHE value is 20, we will use restart value as 125380.ALTER TABLE EMP ALTER COLUMN ID RESTART WITH 125380After restart of internal sequence, insert will complete.If you liked this blog and interested in knowing more about DB2, please subscribe by clicking on Subscribe to ChoudharySumit.com by Email. David Henegar Feb 1, 2023 1 min read The SQL Error -803 with SQL State 23505 is a common issue faced by SQL developers. This issue usually occurs when trying to insert a value that is already contained in an index.CauseThe most common cause of this error is when an existing record's values overlap with the values you are attempting to Insert or Update. It could also be triggered by an issue with the database table definition, a corruption in the index, or a misconfigured foreign key constraint.SolutionIdentify which column is causing the error by looking at the error message.Check the index to see if the value being inserted or updated already exists.If it does, then confirm that any foreign keys setting in place are being honored by the insert or update statement.If no foreign key is set, then delete the existing records that are causing the conflict.If a foreign key needs to be enforced, then modify the definition of the foreign key constraint and/or the table accordingly.FAQs1. How do I know which column is causing the issue?The error message should provide hints about which column or index is causing the error.2. How do I resolve this issue?The most common resolution to this issue is to confirm that any foreign key constraints are being honored. If not, modify the foreign key constraint and/or the table accordingly. If no foreign key is set, deleting any existing records that could be causing the conflict will usually solve the problem.3. What can cause this issue?The issue can be caused by an existing record's values overlapping with the values you are attempting to insert or update, an issue with the database table definition, a corruption in the index, or a misconfigured foreign key constraint.Resources DB2 专栏收录该内容 本文详细阐述了在使用DB2数据库时遇到唯一性约束和索引冲突导致无法插入数据的问题。通过分析描述表结构、执行SQL命令及检查索引，最终揭示了问题根源在于DBA昨日新增的唯一性约束和索引。文章旨在帮助开发者理解这类常见问题的解决路径。 摘要生成于 C知道 ，由 DeepSeek-R1 满血版支持， 前往体验 > DB2 SQL Error: SQLCODE=-803, SQLSTATE=23505, SQLERRMC=2 。 1、查了下，大概意思是违反了唯一性约束啊！ 2、不过，我db2 describe table XX后发现这个表只有ID是不能为空的啊！ 3、最后，直接写了条SQL在命令行执行，同样的错和代码 最后，我查了下表的索引，发现建了个组合索引，才恍然大悟。 原来，DBA昨天建了唯一性约束和索引导致的！ 虽然describe出来只有ID不能为空，但是加了唯一性约束和索引后导致不能插入数据。 福利倒计时 立减￥普通VIP年卡可用 立即使用 xiyuan1999 1 0 觉得还不错? 一键收藏 举报 Have you ever encountered the error message "sqlcode=-803, sqlstate=23505" and wondered what it means? Well, you're not alone. This error is a common one that pops up when you're working with databases, specifically when you're trying to insert or update data in a table that has a unique constraint. In simpler terms, it means that you're trying to add a record that already exists, and the database is telling you "Hey, we can't have duplicates here!" But don't fret, I'm here to walk you through how to handle this error like a pro. Steps to Resolve sqlcode=-803, sqlstate=23505 Before we dive into the steps to resolve this error, let's understand what we're trying to achieve. We want to identify the cause of the error, fix it and ensure that our data is inserted or updated without any hiccups. Step 1: Identify the Duplicate Entry The first step is to figure out which record is causing the issue. When you encounter the sqlcode=-803, sqlstate=23505 error, the database is essentially telling you that a record you're trying to insert or update already exists. You need to find out which record it is. You can do this by looking at the unique index or constraint that's being violated and compare it to the data you're trying to insert. Step 2: Remove or Modify the Duplicate Entry Once you've identified the duplicate entry, you need to decide whether to remove it or modify it. If the duplicate entry is not needed, you can simply remove it. However, if it's important data, you'll need to modify it in a way that it no longer violates the unique constraint. This might involve updating a key field to a new value that doesn't already exist in the table. Step 3: Retry the Insert or Update After resolving the duplicate entry, you can go ahead and retry the insert or update. With the duplicate entry out of the way, you should be able to insert or update your data without encountering the sqlcode=-803, sqlstate=23505 error. Make sure to double-check your data before retrying to prevent any further errors. Once you've gone through these steps, the error should be resolved, and your data should be successfully inserted or updated in the database. It's important to always ensure that the data you're working with is unique when required, to prevent this error from occurring in the first place. Tips for Avoiding sqlcode=-803, sqlstate=23505 Always check for unique constraints on a table before inserting or updating data. Use database functions to generate unique values for key fields. Regularly clean up your data to prevent duplicates. Implement error handling in your database operations to catch and resolve errors like sqlcode=-803, sqlstate=23505. Consider using database tools that can help you identify and resolve duplicate data issues. Frequently Asked Questions What is a unique constraint? A unique constraint is a rule in a database that ensures all values in a column or a set of columns are unique across rows. How do I find which unique constraint was violated? You can find the violated unique constraint by checking the database schema or by looking at the error message, which usually contains the name of the constraint. Can I disable the unique constraint to avoid this error? Disabling a unique constraint is not recommended as it ensures data integrity. Instead, resolve the duplicate data issue. Will retrying the operation always resolve the error? Retrying the operation will only resolve the error if the duplicate entry issue has been fixed first. Is this error specific to a certain database management system? No, this error can occur in any database management system that enforces unique constraints. Summary Identify the Duplicate Entry Remove or Modify the Duplicate Entry Retry the Insert or Update Conclusion Encountering the "sqlcode=-803, sqlstate=23505" error can be a bit of a headache, but it's not the end of the world. With a clear understanding of what causes the error and the steps to resolve it, you can quickly get back on track with your database operations. Remember to always pay attention to unique constraints and handle your data with care to avoid running into this error frequently. Keep these tips and tricks in your back pocket, and you'll be handling unique constraint violations like a seasoned database administrator. Happy coding, and may your data always be unique and error-free! DB2 SQL Error: SQLCODE=-803, SQLSTATE=23505, SQLERRMC=2. 1, check under, probably means to violate the uniqueness constraints ah! 2. However, I found in DB2 DESCRIBE table XX that only ID of the table cannot be empty. 3, finally, directly wrote a SQL execution on the command line, the same error and code Finally, I looked up the index in the following table and realized that a composite index had been created. It turns out that the DBA created a unique constraint and index yesterday! Although only ID cannot be null in a describe, the addition of a unique constraint and index results in the inability to insert data. You attempt to run di-preprocess against the master catalog on IBM WebSphere Commerce Enterprise V7.0 Feature Pack 2 or a later feature pack but the operation fails with the DB2 error SQLCODE=-803 SQLSTATE=23505 on TI_APGROUP_0. SymptomAfter di-preprocess fails to run successfully you see an error message similar to the following example in the logs:DB2 SQL Error: SQLCODE=-803 SQLSTATE=23505 SQLERRMC=1;DB2INST1.TI_APGROUP_0 DRIVER=4.12.55CauseThe DB2 error states that DB2 failed to insert the new record into the due to a primary key constraint violation. This means that there is already a record in the TI_APGROUP_0 table that has the same CATENTRY_ID value as the record you are attempting to insert.EnvironmentThis issue relates to the new search tool used in Feature Pack 2 and newer Feature Packs of WebSphere Commerce V7.0.Diagnosing the problemThere are two main causes for this issue. Either a catalog entry (catentry) has multiple parent categories or a category has multiple parent categories.IDENTIFYING THE CAUSE:To identify if there is a catalog entry that has more than one parent category run the following SQL query against the database:select catentry_id catgroup_id from catgpenrel where catentry_id in (select catentry_id from catgpenrel where catalog_id = group by catentry_id having count(catentry_id) > 1)where is the catalog ID value for which di-preprocess is being run.The above query will provide a list of catalog entry IDs and the categories that they are mapped to if they are mapped to more than one category in the master catalog ID. To identify if the issue is caused by a category having multiple parent categories in the master catalog run the following SQL query against the database:select catgroup_id_parent catgroup_id_child from catgrprel where catalog_id = and catgroup_id_child in (select catgroup_id_child from catgrprel where catalog_id = group by catgroup_id_child having count(catgroup_id_child) > 1)COLLECTING MORE DATA:Alternatively you can collect more logging data in the di-preprocess process to identify the suspect category and catalog entry experiencing the issue.In /instances//search/pre-processConfig/MC_/For Feature Pack 2 modify the wc-dataimport-preprocess-common.xml file.For Feature Pack 3 modify the wc-dataimport-preprocess-parent-catgroup.xml file.In the section:Where the batchSize value is set change the value to batchSize="1". In /instances//xml/config/dataimport modify logging.properties. Change java.util.logging.FileHandler.level to FINEST:java.util.logging.FileHandler.level=FINESTAlso within the logging.properties file change the java.util.logging.FileHandler.limit to 250000000 and java.util.logging.FileHandler.count to 10:java.util.logging.FileHandler.limit=250000000java.util.logging.FileHandler.count=10This will increase the logging however there would be a lot of data logged. In this case it would log 2.5GB of data across 10 files.Then reproduce the di-preprocess issue. After di-preprocess fails examine the wc-dataimport-preprocess.log* files. Find the line that has the following error:INFO: DB2 SQL Error: SQLCODE=-803 SQLSTATE=23505 SQLERRMC=1;DB2INST1.TI_APGROUP_0 DRIVER=4.12.55Parse the lines above it to look for the last record that the operation attempted to insert. For example:0 Aug 11 2011 7:05:33 PM com.ibm.commerce.foundation.dataimport.preprocess.CatalogHierarchyDataPreProcessor fetchChildCatalogEntriesFINER: RETURN [12345]0 Aug 11 2011 7:05:33 PM com.ibm.commerce.foundation.dataimport.preprocess.CatalogHierarchyDataPreProcessor populateTableFINER: ENTRY0 Aug 11 2011 7:05:33 PM com.ibm.commerce.foundation.dataimport.preprocess.CatalogHierarchyDataPreProcessor logCacheContentsFINER: ENTRY0 Aug 11 2011 7:05:33 PM com.ibm.commerce.foundation.dataimport.preprocess.CatalogHierarchyDataPreProcessor logCacheContentsFINEST: ----------Cache contents----------12345=10001_12321;10001_10002;10001_10005----------In the above example it indicates that DB2 failed to insert catentryId 12345. In the cache content section the data is formatted as: catalogId_categoryId with semicolons separating the different entries. This is the category chain in which it traverses. The first entry would be the direct parent category of the catalog entry. The second entry would be the top level category in which ecompasses all the subcategories one of which contains the catalog entry. The remainder of the string would be the subcategory tree in which would be traversed from the top level category to reach the parent category.For each category ID presented you can check the values against the values in the CATGRPREL table to confirm that there is only one entry for the category in question to ensure that there is only one CATGROUP_ID_PARENT. For example:select CATGROUP_ID_PARENT CATGROUP_ID_CHILD CATALOG_ID from CATGRPREL where CATGROUP_ID_CHILD = and CATALOG_ID = For the catalog entry id presented it can be checked against the CATGPENREL table to confirm that there is only one entry for the catalog entry id associated to only one category for the master catalog. For example:select CATGROUP_ID CATALOG_ID CATENTRY_ID from CATGPENREL where CATENTRY_ID = and CATALOG_ID = Resolving the problemAfter you identify the multiple parent categories for the catalog entry or child category you need to make the appropriate corrections so that there is only one parent for the catalog entry or child category. Having multiple direct parent categories for a single catalog entry or a single child category in the master catalog is not supported. When DB2 dies, it'll dump its error codes out in the SQL Exception: DB2 SQL error: SQLCODE: -803, SQLSTATE: 23505 You can find the meaning of the error code from the db2 command prompt with "? sqlxxxx" where xxxx is the SQLCODE from the error message: [db2inst1@matilda db2inst1]$ db2 ? sql-803 SQL0803N One or more values in the INSERT statement, UPDATE statement, or foreign key update caused by a DELETE statement are not valid because the primary key, unique constraint or unique index identified by "" constrains table "" from having duplicate rows for those columns. Explanation: The INSERT or UPDATE object table "" is constrained by one or more UNIQUE indexes to have unique values in certain columns or groups of columns. Alternatively, a DELETE statement on a parent table caused the update of a foreign key in a... (and so on for about three more pages of text...)