

SAP Note

**3116973 - UPDATE FROM Statement Doesn't Update a Record or Fails With an Error****"transaction rolled back by an internal error: TableUpdate failed Where-clause wasn't prepared"****Version** 6 **Validity:** 05.07.2022
- active**Language** English

Header Data

Released On	05.07.2022 02:05:49 By Jinsol Kim (I533393)
Release Status	Released for Customer
Component	HAN-DB SAP HANA Database Display ACRF Content
Priority	Correction with high priority
Responsible	Jinsol Kim (I533393)
Processor	Jinsol Kim (I533393)
Category	Program error
Relevant for Translation	No

Symptom

An SQL Update statement unexpectedly fails to update the target table in following situations:

Case 1) A query execution fails with an error message *"transaction rolled back by an internal error: TableUpdate failed Where-clause wasn't prepared"*.

[Reproducible Scenario]

1. CREATE SCHEMA SNOTE3116973;
2. SET SCHEMA SNOTE3116973;
3. CREATE COLUMN TABLE TEST_TABLE1 (A INT PRIMARY KEY, B NVARCHAR(100), **C NVARCHAR(10)**);
4. INSERT INTO TEST_TABLE1 VALUES (0, 'test', 'insert');
INSERT INTO TEST_TABLE1 VALUES (1, 'test', 'insert');
5. CREATE COLUMN TABLE TEST_TABLE2 (A INT, C NVARCHAR(10));
6. INSERT INTO TEST_TABLE2 VALUES (0, 'update');
INSERT INTO TEST_TABLE2 VALUES (0, 'update');
INSERT INTO TEST_TABLE2 VALUES (0, 'update');
INSERT INTO TEST_TABLE2 VALUES (1, 'update');
7. ALTER SYSTEM ALTER CONFIGURATION ('indexserver.ini', 'SYSTEM') set ('sql', 'multistore_feature_toggle') = '(multistore_operator, column, update, false)' WITH RECONFIGURE
COMMENT 'Set for note 3116973 test scenario';

8. UPDATE TEST_TABLE1 T SET T.C = 'constant' FROM TEST_TABLE1 T JOIN TEST_TABLE2 TT on T.A = TT.A WITH HINT(IGNORE_PLAN_CACHE);

=> Could not execute 'UPDATE TEST_TABLE1 T SET T.C = 'constant' FROM TEST_TABLE1 T JOIN TEST_TABLE2 TT on T.A = TT.A with ...' in 300 ms 156 μs .

[129]: transaction rolled back by an internal error: TableUpdate failed Where-clause wasn't prepared.

9. ALTER SYSTEM ALTER CONFIGURATION ('indexserver.ini', 'SYSTEM') UNSET ('sql', 'multistore_feature_toggle') WITH RECONFIGURE COMMENT 'Unset after note 3116973 test scenario tested';

Case 2) The target table remains unchanged even though the query is successfully executed.

[Reproducible Scenario]

1. SET SCHEMA SNOTE3116973;

2. CREATE COLUMN TABLE "TEST_TABLE3" (
 "C1" NVARCHAR(7) DEFAULT "",
 "C2" NVARCHAR(3) DEFAULT '000',
 "C3" DECIMAL(15, 0) DEFAULT 0,
 "C4" DECIMAL(15, 0) DEFAULT 0,
 PRIMARY KEY (
 "C2",
 "C1"
)
)
 PARTITION BY
 RANGE ("C1") (PARTITION VALUE = 'KOREA', PARTITION VALUE = 'GERMANY', PARTITION
 VALUE = 'CANADA', PARTITION VALUE = 'INDIA', PARTITION VALUE = 'CHINA', PARTITION
 OTHERS),
 RANGE ("C4") (PARTITION VALUE = '29991231235959', PARTITION OTHERS);

3. INSERT INTO "TEST_TABLE3" VALUES ('KOREA', '000', 19991231235958, 20211119000000);
 INSERT INTO "TEST_TABLE3" VALUES ('GERMANY', '000', 19991231235958,
 20211119000000);
 INSERT INTO "TEST_TABLE3" VALUES ('CANADA', '000', 19991231235958, 20211119000000);
 INSERT INTO "TEST_TABLE3" VALUES ('INDIA', '000', 19991231235958, 20211119000000);
 INSERT INTO "TEST_TABLE3" VALUES ('KOREA', '001', 19991231235958, 20211119000000);
 INSERT INTO "TEST_TABLE3" VALUES ('GERMANY', '001', 19991231235958,
 20211119000000);
 INSERT INTO "TEST_TABLE3" VALUES ('CANADA', '001', 19991231235958, 20211119000000);
 INSERT INTO "TEST_TABLE3" VALUES ('INDIA', '001', 19991231235958, 20211119000000);

4. UPDATE "TEST_TABLE3"
 SET "C4" = '29991231235959'
 WHERE "C4" = '20211119000000' AND "C1" = 'INDIA'; -- 2 rows affected

5. ALTER SYSTEM ALTER CONFIGURATION ('indexserver.ini', 'SYSTEM') set ('sql', 'multistore_feature_toggle') = '(multistore_operator, column, update, false)' WITH RECONFIGURE COMMENT 'Set for note 3116973 test scenario';

6. DO
BEGIN

```
VAR_N_C_VIEW = SELECT TOP 200 DISTINCT "C1", "C2" , "C3", "C4" FROM
"TEST_TABLE3" WHERE "C4" = '29991231235959' AND "C1" = 'INDIA';
```

```
SELECT * from "TEST_TABLE3"; -- display table contents before update
```

```
UPDATE "TEST_TABLE3" A SET A.C4 = '20211006175312' FROM "TEST_TABLE3" A,
:VAR_N_C_VIEW B
WHERE
  A.C4='29991231235959' AND
  A.C2=B.C2 AND
  A.C1=B.C1;
```

```
COMMIT;
```

```
SELECT 'updated rows: ' || count(*) from "TEST_TABLE3" where C4 = '20211006175312' AND
C1 = 'INDIA'; -- display the number of updated records. 2 expected, but 0 returned.
SELECT * FROM "TEST_TABLE3"; -- display table contents after update
```

```
END WITH HINT (IGNORE_PLAN_CACHE);
```

7. ALTER SYSTEM ALTER CONFIGURATION ('indexserver.ini', 'SYSTEM') UNSET ('sql',
'multistore_feature_toggle') WITH RECONFIGURE COMMENT 'Unset after note 3116973 test
scenario tested';

Other Terms

Transaction Rollback, TableUpdate, Asynchronouns Block (DO BEGIN ... END)

Reason and Prerequisites

Issue number 272572

Reason:

Due to a programming error in SAP HANA, the number of records to be updated fails to be calculated properly while executing UPDATE FROM statement.

Affected Releases:

- SAP HANA 2:
 - Revisions >= 048.05 (SPS04)
 - Revisions 056.00 - 058.00 (SPS05)

Prerequisites:

- Legacy update engine is used to execute UPDATE operation **AND**
- UPDATE FROM statement updates data in a **non-key** column **AND**
- The column in SET clause is updated with a **constant** value

From examples in Symptom above,

Case1) 7. T.C = 'constant'

Case2) 6 A.C4 = '20211006175312'

Please note that as of HANA 2.0 Rev 057, new update engine is used by default.

So if this issue occurs on HANA 2 revision 057 and 058, it is highly likely that legacy update is configured to be used as a default engine manually.

Please run a following SQL statement in order to check which update engine is specified to be used currently on your system:

```
SELECT value FROM M_CONFIGURATION_PARAMETER_VALUES WHERE KEY =
'multistore_feature_toggle';
```

=> (multistore_operator,column,**update,false**) or (multistore_operator,column,**all,false**) -- this means legacy update engine is currently set as a default update engine for update operation or all other operations as well (such as 'delete' or 'replace').

Solution

Apply one of the following SAP HANA Revisions:

- SAP HANA 2:
 - Revisions >= 059.00 (SPS05)
 - or higher
- or higher

Workaround:

- Specify new update engine as a default engine by executing a following command:

```
ALTER SYSTEM ALTER CONFIGURATION ('indexserver.ini', 'SYSTEM' ) SET ('sql',
'multistore_feature_toggle') = '(multistore_operator, column, update, true)' WITH RECONFIGURE
COMMENT 'SAP Note 3116973. Revert after upgrade to a revision containing the fix';
```

Disclaimer

The SAP HANA configuration parameter [sql] multistore_feature_toggle is an internal parameter and may only be used in the context of this SAP Note. Using such a parameter requires that the SAP HANA system has the revision specified in the SAP Note. Using internal parameters outside of this given scope is not supported. Please unset this parameter once you have upgraded to a revision containing the permanent solution.

Validity

Software Component	From Rel.	To Rel.	And Subsequent	
HDB	2.00	2.00		

Support Packages & Patches

Support Package Patches

Software Component	Support Package	Patch Level
SAP HANA DATABASE 2.0	SP059	000000

References

This document refers to:

SAP Notes

3071782	HAN-DB	Indexserver Crash at UnifiedTable::MVCCWriter::iterator::undoDelete() Upon Rollback of UPDATE FROM Statement
2945435	HAN-DB	Known issues detected in SAP HANA 2 SPS05
2784704	HAN-DB	Known issues detected in SAP HANA 2 SPS04
2380229	HAN-DB	SAP HANA Platform 2.0 - Central Note

This document is referenced by:

Customer Incident (3)

Number	Year	Title	Status	Processor	Customer Number	Customer Name
0000789797	2021	8 - CX_CCDB_EXCEPTION 005: Error during upload processing: S.	Closed	Gaurav Jowhry	0001167355	Virtustream Inc.
0000355909	2023	Run_Time_Error_in_Program EQM_UPD_FLOW_TYPE	Restricted		0001222853	Elm Company
0000719317	2022	ADSO_activation_failure	Restricted	Wallie Cheng	0000137574	Oettinger Davidoff AG

SAP Notes (1)

3220274	HAN-DB	ADSO Activation Fails with Partition Error: invalid partition id : 0 at SQLUpdate/Execution/Impl/ChangePartUtils.cc:xxx
---------	--------	-----------------------------------------------------------------------------------------------------------------------------------------

ServiceNow Case (4)

Number	Year	Text	Status	Processor	Customer Number	Customer
0000719317	2022	ADSO_activation_failure	Closed	Wallie Cheng (I819340)		
0000355909	2023	Run Time Error in Program EQM_UPD_FLOW_TYPE	Closed	Marcus Luz (D055098)		
0000789797	2021	8 - CX_CCDB_EXCEPTION 005: Error during upload processing: S.	Closed	Gaurav Jowhry (I063610)		

	8.- CX_CCDB_EXCEPTION 005: Error during upload processing: S.	Closed	Gaurav Jowhry (I063610)		
--	-------------------------------------------------------------------------------------------	--------	-------------------------	--	--