SAP Note

3091361 - A Query Fails With an Error "[2981] Failed to insert requested attribute " <attribute_name>:<n>" into plan: Lob type not support"

Version 6 **Validity:** 19.11.2021 - active

Language English

Header Data

Released On 19.11.2021 18:42:52 **By** Beate Groetschnig (1035208)

Release Status Released for Customer

Component HAN-DB SAP HANA Database | Display ACRF Content

Priority Correction with high priority
Responsible Jinsol Kim (1533393)
Processor Jinsol Kim (1533393)

Category Program error

Relevant for Translation No

Symptom

A query fails with an error similar to the following:

SAP DBTech JDBC: [2048]: column store error: search table error: [2981] Failed to insert requested attribute "<attribute name>" into plan: Lob type not supported

[Example scenario]

- CREATE COLUMN TABLE TEST_TABLE (STATEMENT_STRING nclob);
- 2. SELECT SUBSTRING(STATEMENT_STRING,1,10000) FROM TEST_TABLE **GROUP** BY **SUBSTRING**(STATEMENT_STRING,1,10000) WITH HINT (NO_USE_HEX_PLAN, USE_OLAP_PLAN);
- => Could not execute 'SELECT SUBSTRING(STATEMENT_STRING,1,10000) FROM TEST_TABLE GROUP BY ...' in 3 ms 458 μ s .

SAP DBTech JDBC: [2048]: column store error: search table error: [2981] Failed to insert requested attribute "STATEMENT_STRING0:10000" into plan: Lob type not supported

Hereinafter, a clause with a pattern like the one below will be referred to as 'Expression Grouping':

GROUP BY **SUBSTRING**(STATEMENT STRING,1,10000)

Other Terms

OLAP Engine, LOB Type, Expression Grouping

Reason and Prerequisites

Issue number 272963

Reason:

Due to a programming error in SAP HANA, HANA SQL Optimizer allows converting an unqualified expression grouping with an argument of LOB type into an OLAP plan.

In general, OLAP Engine does not support expression grouping. However, there are special exceptions supported by OLAP Engine. Among them, there are three expressions that can be converted by HANA SQL Optimizer into an OLAP plan: **SUBSTRING**, **ROUND**, and **SERIES ROUND**.

Due to a missing type validity check for **SUBSTRING**, HANA SQL Optimizer fails to block conversion of **SUBSTRING** into an OLAP plan even when an arugment of LOB type is used and it is likely to raise an error because OLAP Engine doesn't support a projection of LOB type.

Affected Releases:

- SAP HANA 1:
 - Revisions of SPS07 SPS12
- SAP HANA 2:
 - Revisions of SPS00 SPS04
 - Revisions <= 058.00 (SPS05)

Prerequisites:

- SUBSTRING is used in expression grouping AND
- An LOB type (such as CLOB, NCLOB, and BLOB) is used for an argument in expression grouping AND
- HANA SQL Optimizer converts expression grouping into an OLAP plan AND
- LOB column is projected during the execution of the plan

Solution

Apply one of the following SAP HANA Revisions:

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

Workaround:

Apply SQL hint NO_USE_OLAP_PLAN in order to avoid using OLAP engine.

SELECT SUBSTRING(STATEMENT_STRING,1,10000) FROM TEST_TABLE GROUP BY SUBSTRING(STATEMENT_STRING,1,10000) WITH HINT (NO_USE_OLAP_PLAN);

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

2945435	HAN-DB	Known issues detected in SAP HANA 2 SPS05
2784704	HAN-DB	Known issues detected in SAP HANA 2 SPS04
2628684	HAN-DB	Known issues detected in SAP HANA 2 SPS03
2525424	HAN-DB	Known issues detected in SAP HANA 2 SPS02
2462139	HAN-DB	Known issues detected in SAP HANA 2 SPS01
2432112	HAN-DB	Known issues detected in SAP HANA 2 SPS00
2380229	HAN-DB	SAP HANA Platform 2.0 - Central Note
2325090	HAN-DB	Known issues detected in SAP HANA 1 SPS12
2265103	HAN-DB	Known issues detected in SAP HANA 1 SPS11
2184212	HAN-DB	Known issues detected in SAP HANA 1 SPS10
2093754	HAN-DB	Known issues detected in SAP HANA 1 SPS09
2066225	HAN-DB	Known issues detected in SAP HANA 1 SPS08
ServiceNo	ow Case	

This document is referenced by:

Customer Incident (1)

Number	Year	Title	Status	Processor	Customer Number	Customer Name
0004752026	2023	Cannot use LOB Type data from SAP B1 i.e UserText	Restricted	Marwa Hosni	0001413279	Vanguard Myanmar Co., Ltd.

SAP Notes (1) 3102609 HAN-DB SAP HANA 2 SPS05 Revision 059.00

ServiceNow Case (2)

Number	Year	Text	Status	Processor	Customer Number	Customer
0004752026	2023	Cannot use LOB Type data_from_SAP_B1_i.e UserText	Closed	Anonymized (C5348400)		
0000514253	2021	Query return error [2981] Failed to insert requested attribu	Closed	Jinsol Kim (I533393)		