SAP Note

3379624 - Search Query Fails on Calculation View With Error "feature not supported: converting * to no column in CONTAINS predicate"

Version 3 **Validity:** 05.10.2023 - active **Language** English

Header Data

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Release Status	Released for Customer
Component	HAN-DB SAP HANA Database Display ACRF Content
Priority	Recommendations / Additional Info
Responsible	Jinsol Kim (I533393)
Processor	Jinsol Kim (I533393)
Category	Consulting
Relevant for Translation	No

Symptom

You observe that search query with "*" flag in CONTAINS() predicate fails with an error below:

*SAP DBTech JDBC: [7]: feature not supported: converting * to no column in CONTAINS predicate; not applicable to functions, constants, output columns of table functions, etc.*

Other Terms

Search Query, Text Search, Fuzzy Search, Calculation View, Unfolding

Reason and Prerequisites

Reason:

Unlike legacy column view types - *Attribute View* (also known as *Join View*) and *Analytic View*, searching on all columns via asterisk option ("*") in CONTAINS() predicate is not supported with ***Calculation View*** regardless of whether or not it is unfolded. Thus, raising this error is an expected behavior.

It means your search query on attribute view or analytic view with "*" flag will fail after migrating the underlying view to calculation view. In such a case, the search query needs to be modified.

[Example Scenario]

1. Set up Attribute View

```
CREATE COLUMN TABLE TEST_TABLE (COL1 nvarchar(10), COL2 nvarchar(10), COL3 nvarchar(10));

INSERT INTO TEST_TABLE VALUES ('Australia', 'Austria', 'Austin');
```

Now create Attribute View "ATTR_VIEW" that simply projects all columns of TEST_TABLE

2. Run search query on ***Attribute View***

```
SELECT *, SCORE() FROM "_SYS_BIC"."test/ATTR_VIEW" WHERE CONTAINS(*, 'Austria', fuzzy) AND LENGTH(COL1) > 5;
```

=>

```
COL1;COL2;COL3;SCORE()
Australia;Austria;Austin;0.9112580418586731
```

3. Now migrate ATTR_VIEW to Calculation View or re-create it as Calculation View as such.

4. Run search query on ***Calculation View***

```
SELECT *, SCORE() FROM "_SYS_BIC"."test/ATTR_VIEW" WHERE CONTAINS(*, 'Austria', fuzzy) AND LENGTH(COL1) > 5;
```

=>

```
SAP DBTech JDBC: [7]: feature not supported: converting * to no column in CONTAINS predicate; not applicable to functions, constants, output columns of table functions, etc.
```

Solution

There are two options that can be considered:

1. Replace asterisk ("*") in *CONTAINS()* predicate with all columns to be searched on (***preferable***)

   From the example scenario above:

```
SELECT *, SCORE() FROM "_SYS_BIC"."test/ATTR_VIEW" WHERE CONTAINS(*, 'Austria', fuzzy) AND LENGTH(COL1) > 5;
```

   =>

```
SELECT *, SCORE() FROM "_SYS_BIC"."test/ATTR_VIEW" WHERE CONTAINS((COL1, COL2, COL3), 'Austria', fuzzy) AND LENGTH(COL1) > 5;
```

2. Split the query into two parts - *analytic search* and *text search*

```
SELECT *, SCORE() FROM "_SYS_BIC"."test/ATTR_VIEW" WHERE CONTAINS(*, 'Austria', fuzzy) AND LENGTH(COL1) > 5;

=>

DO BEGIN

    temp = SELECT * FROM "_SYS_BIC"."test/ATTR_VIEW" WHERE LENGTH(COL1) > 5 WITH HINT(NO_INLINE); -- analytic search

    SELECT *, SCORE() FROM :temp WHERE CONTAINS(*, 'Austria', fuzzy); -- text search

END;
```

Please note

- SQL Optimizer will try to simplify the query during plan generation by merging these two parts into one (if possible), which becomes nothing but the original failing search query.
  Hint **NO_INLINE** forces SQL Optimizer not to take such a coalescence into account.
- The result returned with this approach could be largely different from the first approach or the result with Attribute View if *CONTAINS()* predicate is provided with a complex logic and base tables under the calculation view are defined with fulltext indexes.

Validity

Software Component	From Rel.	To Rel.	And Subsequent	
HDB	1.00	1.00		
	2.00	2.00		

References

This document refers to:

SAP Knowledge Base Articles

2800008	HAN-DB-ENG-TXT	FAQ: SAP HANA Fulltext Indexes
2399990	HAN-DB	How-To: Analyzing ABAP Short Dumps in SAP HANA Environments

SAP Notes

2380229	HAN-DB	SAP HANA Platform 2.0 - Central Note
1523337	HAN-DB	SAP HANA Database 1.00 - Central Note

This document is referenced by:

Customer Incident (1)

Number	Year	Title	Status	Processor	Customer Number	Customer Name

0000812127	2023	Calculated View Error after Conversion - SYS_BIC.ZMDG_BP_SUP_	Restricted		0000834366	Nokia Solutions and Networks Oy

ServiceNow Case (1)

Number	Year	Text	Status	Processor	Customer Number	Customer
0000812127	2023	Calculated View Error after Conversion - SYS_BIC.ZMDG_BP_SUP_	Closed	Jinsol Kim (I533393)		