

SAP Note

**3301406 - Indexserver Crash at ptime::qo::rewrite::removeApply With Table Function "SQL FUNCTION(...)" in use****Version 7** **Validity:**
10.05.2023 - active**Language** English

Header Data

Released On	10.05.2023 08:23:59	By Beate Groetschnig (I035208)
Release Status	Released for Customer	
Component	HAN-DB-SCR SAP HANA SQL Script	Display ACRF Content
Other Components	HAN-DB SAP HANA Database	
Priority	Correction with high priority	
Responsible	Jinsol Kim (I533393)	
Processor	Beate Groetschnig (I035208)	
Category	Program error	
Relevant for Translation	No	

Symptom

You observe Indexserver crashes with a callstack similar to the following:

[CRASH_STACK] Stacktrace of crash: (0000-00-00 00:00:00 000 Local)

```
0: 0x0000000000000000 in ptime::qo::rewrite::removeApply
1: 0x0000000000000000 in ptime::qo_ApplyRemoval::apply
2: 0x0000000000000000 in ptime::qo_Rule::checkAndApply
3: 0x0000000000000000 in ptime::qo_Normalizer::applyRule
4: 0x0000000000000000 in ptime::qo_Normalizer::rewrite
5: 0x0000000000000000 in ptime::qo_Normalizer::rewrite
6: 0x0000000000000000 in ptime::qo_Normalizer::normalize
7: 0x0000000000000000 in ptime::qo_Normalizer::normalize
8: 0x0000000000000000 in ptime::QueryOptimizer::optimize_qo_plan
9: 0x0000000000000000 in ptime::QueryOptimizer::optimize_plan
10: 0x0000000000000000 in ptime::Query::compile_parse_tree
11: 0x0000000000000000 in ptime::Query::_compile
12: 0x0000000000000000 in ptime::Query::compile
13: 0x0000000000000000 in ptime::Query::PlanCache::Manager::compile_
14: 0x0000000000000000 in ptime::Query::PlanCache::Manager::compile_and_insert_
15: 0x0000000000000000 in ptime::Query::PlanCache::Manager::lookup_or_compile_
16: 0x0000000000000000 in ptime::Query::PlanCache::Manager::lookup_or_compile
17: 0x0000000000000000 in ptime::Statement::lookupOrCompileCode_
18: 0x0000000000000000 in ptime::Statement::compile_
19: 0x0000000000000000 in ptime::PreparedStatement::compile_
20: 0x0000000000000000 in ptime::Connection::prepareStatement
21: 0x0000000000000000 in ptime::Connection::prepareStatement
```

```

22: 0x0000000000000000 in ptime::SessionEAPIManager::PrepareStatementScope::prepare
23: 0x0000000000000000 in ptime::ActionExecutor::prepareQuery
24: 0x0000000000000000 in ptime::ActionExecutor::prepareAction
25: 0x0000000000000000 in ptime::SessionHandler::prepareAction
26: 0x0000000000000000 in .LTHUNK386.lto_priv
27: 0x0000000000000000 in ptime::SessionHandler::receiveMessage_
28: 0x0000000000000000 in ptime::SessionHandler::handleNotDecodedMessage
29: 0x0000000000000000 in SessionLayer::CommEventJob::run
30: 0x0000000000000000 in Execution::JobObjectImpl::run
31: 0x0000000000000000 in Execution::JobWorker::runJob
32: 0x0000000000000000 in Execution::JobWorker::run
33: 0x0000000000000000 in Execution::Thread::staticMainImp
34: 0x0000000000000000 in Execution::pthreadFunctionWrapper
35: 0x0000000000000000 in <no symbol>

```

[Example Scenario]

```
CREATE SCHEMA 3301406_TEST;
```

```
SET SCHEMA 3301406_TEST;
```

```
CREATE COLUMN TABLE T1 (aint, b int, c int);
```

```
SELECT
```

```
a,
```

```
b,
```

```
(SELECT col FROM SQL FUNCTION (in arg int => T1.a) RETURNS TABLE (col int) BEGIN
RETURN SELECT max(a) AS col FROM T1 tab WHERE tab.c = :arg ; END)
FROM T1;
```

=> *This query will lead Indexserver to crash*

Please make sure not to try this scenario at your system with the affected releases below as it will crash Indexserver and the system has to be restarted!

Other Terms

SQL FUNCTION, UDF

Reason and Prerequisites

Issue number 302750

Reason:

Due to a programming error in SAP HANA, using a field expression (or column) as an argument to "SQL FUNCTION (...)", which is neither a supported nor defined feature, is not blocked, and it thus leads Indexserver to crash.

Affected Releases:

- SAP HANA 2:
 - Revisions of SPS03 - SPS05
 - Revisions <= 067.00 (SPS06)

Prerequisites:

- Table function "SQL FUNCTION" is used in the query **AND**
- A field (or column) of an object is used as an argument to that function

Solution

Apply one of the following SAP HANA Revisions:

- SAP HANA 2:
 - Revisions >= 067.01 (SPS06)
 - or higher
- or higher

Please make sure that upgrading the affected system to one of solution revisions above won't make the problematic query executable. The affected query will still fail (but with an exception instead of Indexserver crash) as the feature itself is not supported. Please refer to "**Workaround**" below to rewrite the query.

Workaround:

- Use a constant value (i.e, 10 or 'const') as an argument to "SQL FUNCTION" instead of a field expression or table column (i.e, T1.a).

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	SP067	000001

References

This document refers to:

SAP Notes

3128366 HAN-DB [Known issues detected in SAP HANA 2 SPS06](#)
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](#)
2380229 HAN-DB [SAP HANA Platform 2.0 - Central Note](#)

ServiceNow Case

This document is referenced by:

SAP Notes (2)

3318727 HAN-DB [SAP HANA 2 SPS07 Revision 071.00](#)
3312883 HAN-DB [SAP HANA 2 SPS06 Revision 067.01](#)