Summary

Symptom
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**************************************************
* This is an issue only for scale-out environment  *
**************************************************
```

in most cases, stored procedure based queries of BW are sent to an indexserver where the actual query objects (table, view, etc) do not exist. And the indexserver which received the request must forward it to a right indexserver. This situation leads to a performance problem.

Other terms
trexviadbsl, trexviadbslwithparameter, TREX_EXT_AGGREGATE, TREX_DBS_AGGREGATE, scaleout

Reason and Prerequisites
The current routing mechanism for the stored procedure based queries is Round-Robin. This does not consider the locations of query objects.

Solution
Apply all of the following fixes:

1.   ABAP support package or source code correction

2.   SAP HANA SPS 5 (= Revision 45) or later

3.   ABAP kernel version must be 721 or later. Refer to the attached note 1716826.

After applying the patch, authorization of required DB users/schemas (normally the user name is SAP<SID of BW system>) needs to be edited on HANA Studio. Add the following SQL object on the tab "SQL Privileges":

   TREXVIADBSLWITHPARAMETER (SYS)
   and select "EXECUTE" with "No" for grantable to others

Additional information

   o   Only in case that the above three corrections (ABAP + HANA + ABAP Kernel) are applied, this feature will be activated. And the order of applying the corrections does not matter.

   o   If some of the corrections are missing, this feature will not be used at all. The system runs just as before.

   o   It is harmless to apply the corrections to a single node system. This feature will just not be used in the system.

   o   It is recommended applying the related note 1798043 as well. This feature could run into the problem described in the note, if very many queries are executed in parallel.

```
--------------------------------------------------------------------
|Manual Pre-Implement.                                             |
--------------------------------------------------------------------
|VALID FOR                                                        |
|Software Component    SAP_BASIS                    SAP Basis compo...|
| Release 730          SAPKB73008 - SAPKB73008                    |
| Release 731          SAPKB73105 - SAPKB73105                    |
| Release 740          w/o Support Packages                       |
--------------------------------------------------------------------
```

Create user parameter HDB_TREXVIADBSLPARAM:

1.   go to transaction SE80

2.   select "PACKAGE" in the dropdown menu

3.   set "STREX" on the package name field

4.   right click on "SET/GET Parameter" and select "CREATE"

5.   Parameter ID: HDB_TREXVIADBSLPARAM

6.   Short Description: Switch of TrexViaDbsl

7.   Save

Header Data

```
Release Status:        Released for Customer
Released on:           19.02.2013    09:48:55
Master Language:       English
Priority:              Correction with high priority
Category:              Performance
Primary Component:     BC-DB-HDB SAP HANA database
```

Valid Releases

Software Component	Release	From Release	To Release	and Subsequent
HDB	1.50	1.50	1.50	
SAP_BASIS	71	730	730	
SAP_BASIS	731	731	731	
SAP_BASIS	740	740	740	

Support Packages

Support Packages	Release	Package Name
SAP_BASIS	730	SAPKB73009
SAP_BASIS	731	SAPKB73106
SAP_BASIS	731	SAPKB73107
SAP_BASIS	740	SAPKB74001

Related Notes

Number	Short Text
1798043	SAP HANA BW: lock error on shared memory object
1716826	Usage of the downward compatible kernel 721 (EXT)

Correction Instructions

Correction Instructions	Valid from	Valid to	Software Component	Type *)	Reference Correction	Last Changed
1175111	740	740	SAP_BASIS	C	Y4HK000922	31.10.2012 16:06:30
1175112	731	731	SAP_BASIS	C	Y3SK032839	31.10.2012 16:15:28
1175164	730	730	SAP_BASIS	C	Y3YK043074	18.02.2013 10:19:00
1199791	731	731	SAP_BASIS	C	Y3SK035611	30.11.2012 17:54:11
1199793	730	730	SAP_BASIS	C	Y3YK044754	18.02.2013 10:19:49
1530417	731	731	SAP_BASIS	C	Y3SK035748	03.12.2012 18:36:12
1530418	730	730	SAP_BASIS	C	Y3YK044845	18.02.2013 10:20:02

*) C Correction, B Preprocessing, A Postprocessing, M Undefined Work