

1736976 - Sizing Report for BW on HANA

Version	92	Type	SAP Note
Language	English	Master Language	English
Priority	Recommendations / Additional Info	Category	Program error
Release Status	Released for Customer	Released On	11.07.2018
Component	SV-SMG-SER (SAP Support Services)		

Please find the original document at <https://launchpad.support.sap.com/#/notes/1736976>

Symptom

Enhancement of Function Module /SDF/HANA_TABLE_SIZE and new Report /SDF/HANA_BW_SIZING

You intend to migrate an SAP NetWeaver BW system from any database platform to the SAP HANA In-Memory Database and need information on hardware sizing of the HANA platform, or you want to verify the sizing for an SAP NetWeaver BW system that has already been migrated to HANA.

Other Terms

BW on HANA Sizing, Sizing, SAP In-Memory Database, SAP HANA, SAP In-Memory Computing, BW HANA Sizing, Orange sizing, scale-out

Reason and Prerequisites

Starting with version 7.30 SP5 you can run SAP Business Information Warehouse (SAP BW) on SAP HANA as database platform. This enables you to leverage the In-Memory capabilities of HANA and the SAP-HANA-optimized BW objects.

Solution

PLEASE NOTE: This note will not be maintained any more. For later updates of the sizing report (version 2.2.0 and above) please apply SAP note 2296290.

IMPORTANT: Before applying this note you first have to upgrade to at least ST-PI 2008_1_700 SP 08. An upgrade of ST-PI to the latest SP is recommended in any case.

Latest version of BW on HANA Sizing Report: 2.1.8

Major Changes 2.1.8:

- Updated 7.40 row store list
- Bug fix in handling of 'n/a' results

Major Changes 2.1.7:

- Bug fix in Hybrid LOB handling

Major Changes 2.1.6:

- Bug fix of size calculation for InfoCubes
- Bug fix in Hybrid LOB handling

Major Changes 2.1.5:

- Bug fix of size calculation for InfoCubes
- Correction in Hybrid LOB handling
- Bug fix for calculation of non-active share of tables
- Haswell support (1.5TB / 3 TB)

Major Changes 2.1.4:

- Bug fix of size calculation for InfoCubes
- Integration of Hybrid LOBs
- Persistence of sizing results in database tables
- Color coding if utilization of master or worker nodes exceed certain thresholds
- Elimination of duplicates in table details

Major Changes 2.1.3:

- Bug fix of statistics table issue (only for MaxDB)
- Integration of HANA PAK sizing (first approach)

Major Changes 2.1.2:

- Bug fix in length handling of tables with character fields with improved sizing for DSO objects
- For InfoCubes number of characteristics is now taken into account instead of number of dimensions
- Chose between 7.30 and 7.40 target release to determine correct set of rowstore tables
- Display DB host rather than Application Server host in System Information section

Major Changes 2.1.1:

- Bug fix in length handling of tables with BLOBs
- In 7.40 based systems, row store tables are determined by their DDIC attributes, not by hard coded list
- Dimension tables are determined by metadata rather than by naming conventions

Major Changes 2.1:

- Revised row store sizing:
 - Now considers indexes for row store tables
 - Adapted compression factor for row store tables
- Bug fix to correctly handle dimension tables
- Added utilization percentage for master and worker nodes

Major Changes 2.0.1:

- Support for various memory configurations
- Minimum / recommended memory configuration
- Adapted compression factor for row store tables

So far, to estimate the resource requirements of the SAP HANA In-Memory Database, a set of database-dependent scripts has been provided which analyze the database dictionary and compute the size of the relevant source database tables. Please refer to note 1637145 for more details. To simplify sizing of an SAP BW system that is supposed to be migrated, we now provide the database independent ABAP report /SDF/HANA_BW_SIZING which computes all information relevant to sizing a HANA database server. A first version of the report is available with this note. ST-PI 2008_1_7xx SP08 or higher is required as

prerequisite. Improvements of the report are also shipped with this SAP Note, so please make sure that you always download the latest version of the note.

Important: If you plan to migrate a BW system with significant size (e.g. 20+TB source system database size), please read SAP note 1855041.

For a detailed description of the report, its input parameters, and how to interpret its output, please refer to the attached document "SAP_BW_on_HANA_Sizing_Report.pdf".

The ABAP report now includes the following features:

- enhanced sizing precision by table type specific compression factors
- "non-active data" concept: optimized memory consumption by taking into account that specific tables are preferred for memory displacement (e.g. tables belonging to objects in Corporate Memory).
- Sizing of a Part of the scenarios can be done specifying a subset of BW Objects which have to be considered for sizing. Dependent BW Objects will be automatically taken into account.
- Extended Tables: Sizing information for Sybase IQ database to support extended tables.

Note that for a stand-alone version of SAP HANA (i.e. HANA without BW) separate sizing information is available in note 1514966.

Prerequisite for Implementing this Note is ST-PI 2008_1_700 SP 08 or ST-PI 2008_1_710 SP 08.

Manual Activities

Manual Activity

|VALID FOR |
 |Software Component ST-PI Support Tools |
 | Release 2008_1_700 SAPKITLRD6 - SAPKITLRD7 |
 | Release 2008_1_710 SAPKITLRE6 - SAPKITLRE7 |
Release 2008_1_710 SAPKITLRE6 - SAPKITLRE7

Please extend data structure /SDF/HANA_DB_SIZE by adding the following five lines (using transaction SE11) as additional components at the end of the structure:

Component Component type Data Type Length Decimal

TAB_TYPE CHAR 4 0
 BUCKET INT2 INT2 5 0
 UNLD_FACT DEC 3 2
 ABAP_SIZE DEC 22 0
 HANA_SIZE DEC 22 0

Software Components

Software Component	Release
ST-PI	2008_1_700 - 2008_1_700
ST-PI	2008_1_710 - 2008_1_710
ST-PI	740 - 740

Correction Instructions

Software Component	From	To	Version	Changed on	ID
ST-PI	2008_1_700	2008_1_710	1	03.05.2013 14:56:35	0001250645
ST-PI	2008_1_700	2008_1_710	1	17.07.2012 15:22:16	0001495989
ST-PI	2008_1_700	2008_1_710	1	17.07.2012 15:23:53	0001495990
ST-PI	2008_1_700	2008_1_710	1	04.07.2013 15:07:18	0001613553
ST-PI	2008_1_700	2008_1_700	1	09.06.2015 09:22:31	0001873108
ST-PI	740	740	1	29.07.2015 09:48:56	0001910661
ST-PI	2008_1_700	2008_1_700	1	18.06.2015 12:39:32	0001880790
ST-PI	740	740	1	26.06.2015 09:06:56	0001886420
ST-PI	2008_1_700	2008_1_700	1	26.06.2015 09:09:28	0001886421
ST-PI	2008_1_700	2008_1_710	1	08.03.2013 08:58:32	0001205536
ST-PI	2008_1_700	2008_1_710	1	09.04.2013 14:49:08	0001229138
ST-PI	2008_1_700	2008_1_710	1	14.05.2013 17:07:17	0001258912
ST-PI	2008_1_700	2008_1_710	1	14.05.2013 17:14:20	0001258913
ST-PI	2008_1_700	2008_1_710	1	24.05.2013 13:17:49	0001269088
ST-PI	2008_1_700	2008_1_710	1	30.04.2014 13:05:55	0001411651
ST-PI	2008_1_700	2008_1_710	1	30.04.2014 13:49:01	0001411672
ST-PI	2008_1_700	2008_1_710	1	15.05.2014 14:57:03	0001422486
ST-PI	2008_1_700	2008_1_710	1	13.05.2015 14:40:00	0001555659
ST-PI	2008_1_700	2008_1_710	1	13.05.2015 15:20:06	0001555757
ST-PI	2008_1_700	2008_1_710	3	06.07.2012 08:45:42	0001487262
ST-PI	2008_1_700	2008_1_710	4	07.11.2012 11:59:05	0001504395

ST-PI	2008_1_700	2008_1_710	3	26.07.2013 14:59:36	0001545305
ST-PI	2008_1_700	2008_1_710	4	26.07.2013 15:00:26	0001547046
ST-PI	2008_1_700	2008_1_710	2	18.01.2013 08:44:38	0001560634
ST-PI	2008_1_700	2008_1_710	2	28.02.2013 12:57:37	0001582141
ST-PI	2008_1_700	2008_1_710	2	28.02.2013 12:56:02	0001595253
ST-PI	2008_1_700	2008_1_710	4	25.07.2013 12:02:24	0001597590
ST-PI	2008_1_700	2008_1_710	2	19.12.2013 09:22:20	0001676719
ST-PI	2008_1_700	2008_1_710	2	19.12.2013 09:23:44	0001676720
ST-PI	2008_1_700	2008_1_710	5	23.04.2014 14:14:34	0001727555
ST-PI	2008_1_700	2008_1_710	2	06.03.2015 10:26:46	0001835243
ST-PI	740	740	2	14.07.2015 14:18:32	0001899073
ST-PI	2008_1_700	2008_1_700	3	14.07.2015 14:32:38	0001899078
ST-PI	2008_1_700	2008_1_700	2	29.07.2015 10:14:13	0001910662
ST-PI	740	740	6	15.09.2015 08:10:17	0001880789
ST-PI	740	740	8	24.06.2015 10:17:28	0001835242
ST-PI	740	740	6	03.12.2015 13:21:54	0001872984
ST-PI	2008_1_700	2008_1_710	3	26.01.2015 16:47:51	0001434895
ST-PI	2008_1_700	2008_1_710	5	07.11.2012 12:00:02	0001174147
ST-PI	2008_1_700	2008_1_710	3	17.01.2013 15:09:46	0001174529
ST-PI	2008_1_700	2008_1_710	2	15.05.2013 14:01:42	0001229140
ST-PI	2008_1_700	2008_1_710	2	03.05.2013 14:59:11	0001244419
ST-PI	2008_1_700	2008_1_710	2	13.11.2014 11:20:43	0001442884
ST-PI	2008_1_700	2008_1_710	3	26.01.2015 16:49:02	0001443429
ST-PI	2008_1_700	2008_1_710	2	13.11.2014 11:24:21	0001490380
ST-PI	2008_1_700	2008_1_710	2	26.01.2015 16:42:15	0001491322
ST-PI	740	740	4	24.06.2015 08:23:54	0001555663
ST-PI	740	740	5	24.06.2015 08:24:59	0001555660
ST-PI	740	740	12	24.06.2015 08:41:24	0001442853
ST-PI	740	740	12	24.06.2015 08:46:12	0001443428

ST-PI	740	740	5	24.06.2015 10:19:57	0001555658
ST-PI	740	740	9	24.06.2015 10:27:51	0001490382
ST-PI	2008_1_700	2008_1_710	4	13.11.2014 11:15:40	0001162763

Other Components

Component	Description
HAN-DB-ENG-BW	SAP HANA BW Engine
HAN-DB	SAP HANA Database

Prerequisites

Software Component	From	To	SAP Note/KBA	Title	Component
ST-PI	2008_1_700	2008_1_700	1736976	Sizing Report for BW on HANA	SV-SMG-SER
ST-PI	2008_1_700	2008_1_710	1736976	Sizing Report for BW on HANA	SV-SMG-SER
ST-PI	740	740	1736976	Sizing Report for BW on HANA	SV-SMG-SER

This document refers to

SAP Note/KBA	Title
706478	Preventing Basis tables from increasing considerably
1909597	SAP BW Migration Cockpit for SAP HANA
1872170	ABAP on HANA sizing report (S/4HANA, Suite on HANA...)
1855041	Sizing Recommendation for Master Node in BW-on-HANA
1829728	BW Housekeeping Task List
1777465	SAP HANA Feasibility Check for Netweaver BW on HANA

1767880	Non-active data concept for BW on SAP HANA DB
1637145	SAP BW on HANA: Sizing SAP In-Memory Database

This document is referenced by

SAP Note/KBA	Title
2000002	FAQ: SAP HANA SQL Optimization
1909597	SAP BW Migration Cockpit for SAP HANA
1903576	SAP HANA DB: Additional Main Memory in Exceptional Cases
1767880	Non-active data concept for BW on SAP HANA DB
2021372	Sizing Report for BW on HANA (for BW 3.5 Systems)
706478	Preventing Basis tables from increasing considerably
1637145	SAP BW on HANA: Sizing SAP In-Memory Database
2140959	SAP HANA Dynamic Tiering - Additional Information
1964437	SAP HANA on AWS: Supported AWS EC2 products
1829728	BW Housekeeping Task List
1777465	SAP HANA Feasibility Check for Netweaver BW on HANA
1855041	Sizing Recommendation for Master Node in BW-on-HANA

Attachments

File Name	File Size	Mime Type
HANA_BW_Scale_Out_V1_3.pdf	382	application/pdf
SAP_BW_on_HANA_Sizing_V2_1_6.pdf	892	application/pdf