SAP Note 1702409 - HANA DB: Optimal number of scale out nodes for BW on HANA

Note Language: English **Version: 2 Validity:** Valid Since 02.04.2012

Summary

Symptom
You consider running a distributed SAP HANA DB and need to decide for the number of scale out nodes to have best performance

Other terms
IMCE, HANA, in-memory, scale out, minimal, distribution, performance

Reason and Prerequisites
Prerequisite: Based on the sizing you need to run a distributed SAP HANA DB
Reason: To get the best performance for SAP BW running on a distributed SAP HANA, SAP has determined a good distribution of the data needed by SAP BW

Solution
To get best performance for SAP BW running on SAP HANA, it is strongly recommended that you use at least three nodes for your SAP HANA DB.

Reasons:
If you run SAP BW on SAP HANA you store different kind of data in the DB (like tables used by the SAP Netweaver Stack, statistics, Master Data tables, fact tables etc.). Various tests have shown, that it is of great advantage to distribute the DB tables in a way, that the different work loads (load from NW stack, writing statistics, doing analytics) do not compete in parallel for the same hardware resources. Therefore it is strongly recommended to have a minimum of three servers in the distributed SAP HANA DB. In that case you can have a dedicated server (called "master"), which handles the work load of the Netweaver Stack, the statistics and the tables located in the row store. The other servers (called "slaves") will be used to cope with the work load of all the transactional data and the master data. If you use at least three servers, the initial distribution of the tables will ensure that only transactional data and master data will be placed on the slave hosts.

Having at least two slave servers allows SAP HANA to partition the transactional data and distribute the master data, which improves the loading times and allows better reporting performance.

In case your current sizing would result in only two servers, but you expect to grow to three servers, then starting with three servers instead of two servers avoids efforts for re-splitting and re-distibuting existing tables, when you add the third host.

Note: Independend of the work load distribution, it is recommended to use an additional server as "stand by server" to be used in a failover scenario.

Header Data

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Primary Component: BC-DB-HDB SAP HANA database

Valid Releases

Software Component	Release	From Release	To Release	and Subsequent
HDB	1.00	1.00	1.00	

Related Notes

Number	Short Text
1523337	SAP In-Memory Database 1.0: Central Note
1514967	SAP HANA: Central Note