

BI Accelerator: a Solution to Boost BI Query Performance

Applies to:

SAP NetWeaver 2004s

Summary:

This paper describes BI accelerator and lists pre requisites of BI accelerator addressing its technical aspects, maintenance support and future prospects.

Author: Sanyukta Srivastava

Company: HCL Technologies

Created on: 3rd July 2007

Author Bio

Sanyukta Srivastava is working as a SAP BI Consultant in HCL Technologies.

Table of Contents

Introduction	3
Pre-Requisites	3
Acquiring BI Accelerator	3
Maintenance and Support.....	3
Administration of BI Accelerator	4
Uses of BI Accelerator	4
Future Prospects of BI Accelerator.....	4
Related Contents	5
Copyright.....	5

Introduction

SAP BI Accelerator comes into picture to address serious performance problems of BI queries. BI Accelerator is a plug-in appliance delivering:

- Scalability in terms of expandable blade hardware infrastructure delivered by IBM or HP
- Performance in memory processing, fully leveraging the power of Intel Processors
- Flexibility in terms of no dedicated tuning efforts and reduced load times.

Pre-Requisites

The requirements for BI Accelerator are:

- SAP BI in SAP NetWeaver 2004s.
- We also require an installation based on 64 bit architecture as BI Accelerator is based on TREX technology.
- Queries with high database read times.
- Ad-hoc reporting on high data volumes.

NOTE:

- BI Accelerator cannot be used for standard KMC functionality.
- A TREX installation cannot be used as a BI Accelerator

Acquiring BI Accelerator

SAP NetWeaver BI Accelerator is packaged as an appliance that runs the BI Accelerator functions within standard blade server systems equipped with Intel processors and built-in storage. IBM or Hewlett Packard are the current hardware partners deliver the preconfigured appliance to the customer site. The appliance must be cabled into the existing SAP NetWeaver BI infrastructure where a user sets RFC connection, runs few routine checks and selects the Info cubes to be accelerated.

SAP and hardware partners Intel, IBM and HP work to ensure that SAP NetWeaver BI Accelerator runs with the desired speed and stability and customers enjoy the benefits. SAP is distributing new functions on preconfigured hardware to ensure that customers experience full benefits of modern, adaptive infrastructures based on blade servers. The blade server revolution goes far beyond a compact form factor and inexpensive upsizing. Blade servers feature highly automated administration, monitoring, self-repair, reconfiguration and failover capabilities. There is a current restriction of maximal 32 blades (HP) and 28 blades (IBM) respectively. The new distribution strategy is designed to speed up implementation and reduce costs for our customers.

The operating system used to run BI Accelerator is 64-bit SUSE Linux (SLES).

Maintenance and Support

Maintenance is organized in same way as other SAP products. Software issues are handled by SAP NetWeaver BI Accelerator development team, and link to hardware partners is via Linux Lab. The customer makes an agreement for both hardware procurement and hardware and software maintenance with the hardware partner. Customer is responsible for applying patches and Service Packages or for contracting this work to third parties.

A new BI Accelerator customer assigns SAP team with a user and password for remote access to accelerator hardware. The SAP team observes all reasonable security precautions for assigned user and respects the privacy of company data. For security reasons, team strongly recommends use of WTS (Windows Terminal Server) with PuTTY (a freeware tool for building secure Telnet connections to hardware).

Administration of BI Accelerator

Indexes of highly critical data of an InfoCube are stored in main memory by setting the BI Accelerator Index property flag as 'Always keep the BI Accelerator index in main store' or by scheduling the report RSDDTRES_INDEX_LOAD_UNLOAD in a process chain preceding the first query access.

Transaction RSRV offers you all important checks regarding performance and consistency and offers repair programs to rebuild or adjust BI Accelerator indexes. For e.g. RSRV is used to check the size of delta index and to trigger the merge as a repair.

Uses of BI Accelerator

SAP NetWeaver BI Accelerator can be used in all cases where aggregates can be used:

- Real-time InfoCubes: closed requests can be indexed by SAP NetWeaver BI Accelerator; open requests will be read from database.
- Multi Providers: any indexed InfoCube as part of the MultiProvider will use SAP NetWeaver BI Accelerator. Note that overall query performance is defined by slowest InfoCube in a MultiProvider environment.
- Inventory handling: InfoCubes containing non-cumulative key figures can be indexed.
- OLAP interfaces: XMLA, ODBO, OLAP and BAPI.
- List cube
- Custom-specific implementation based on INFOPROV_READ.

Future Prospects of BI Accelerator

- SAP BI Accelerator will be used for a new type of InfoProvider which will be a combination of DataStore Object and InfoCube.
- SAP NetWeaver BI Accelerator will be used for more complex and time-consuming analytical operations such as top n reporting or counters.

Related Contents

<http://www.help.sap.com>

www.sdn.sap.com

Disclaimer and Liability Notice

This document may discuss sample coding or other information that does not include SAP official interfaces and therefore is not supported by SAP. Changes made based on this information are not supported and can be overwritten during an upgrade.

SAP will not be held liable for any damages caused by using or misusing the information, code or methods suggested in this document, and anyone using these methods does so at his/her own risk.

SAP offers no guarantees and assumes no responsibility or liability of any type with respect to the content of this technical article or code sample, including any liability resulting from incompatibility between the content within this document and the materials and services offered by SAP. You agree that you will not hold, or seek to hold, SAP responsible or liable with respect to the content of this document.