

Performance Optimization through BI Accelerator Indexes

Applies to:

SAP NETWEAVER 2004S BI

Summary

BI Accelerator index is a structure that contains replicated data and indexes. This article describes some fact about BI accelerator Index and the Performance Optimization using Indexes.

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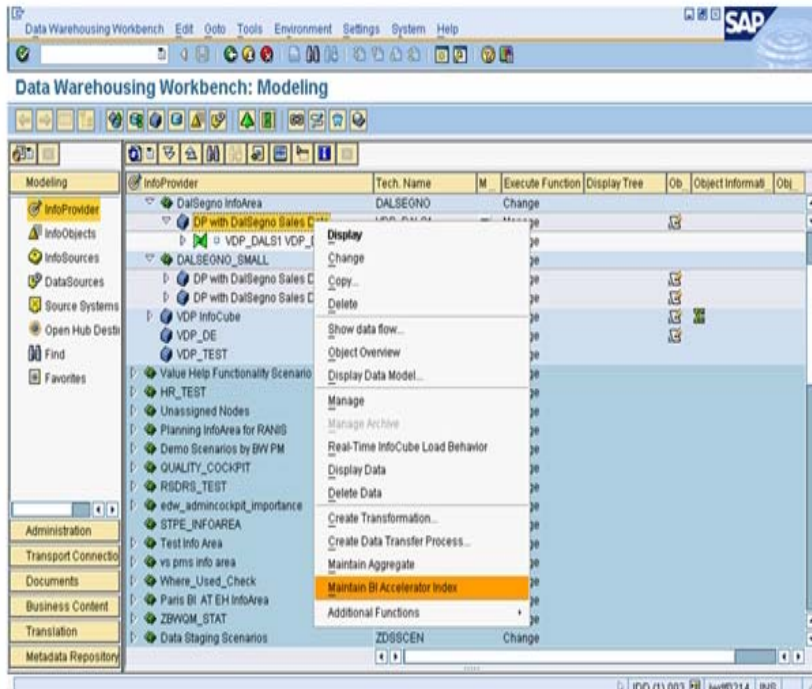
Introduction

BI Accelerator index is a structure that contains replicated data and indexes. BI accelerator index is used for better query performance .It contains Bi info cube data in compressed form and stores the data at same level of granularity .You can create only one BI accelerator index for each infocube. BI Accelerator index are composed of Fact tables, Dimension tables and SID tables, that are part of enhanced star schema of the selected infocube .All the dimension tables of the info cube star schema are required for the BI Accelerator Index. We adopt following steps in order to have query performance gains:

Creating BI Accelerator Indexes

There are two paths to create BI Accelerator Index:

- From Data Warehousing workbench (RSA1), choose Info Provider and Info Provider Tree Navigate to the Info Cube whose queries you want to optimize. In context menu of Infocube choose Maintain BI Accelerator Index .The BI Accelerator Index Maintenance screen appears.
- From Aggregate /BI Accelerator Index Maintenance (RSDDV), select infocube .Choose BI Accelerator Index. The BI Accelerator Index Maintenance screen appears.



And Finally Activate the BI Accelerator Index.

Loading BIA Indexes

To Use BI Accelerator Index in Reporting you have to fill it with data .TO schedule a background job to fill BI Accelerator Index choose continue .Reading the data from database and writing the data to BI Accelerator Server can be performed in parallel in BI system in different ways .To do this maintain system parameters in BI Accelerator Monitor.

Select the BIA Index and press the Active icon.
Indexing is complete when the main object status light is green.



The Technical name in BI Accelerator Index are based on the underlying star schema tables of infocube :<SID>_<BI0/BIC>:<F/D/S/Y/X><Infocube Name>.

After BI Accelerator has been filled you can choose Cancel to return to the source transaction or Continue to continue to the first part of BI Accelerator Maintenance.

Deleting the BI Accelerator Indexes

We can temporarily deactivate or delete an active and filled BI Accelerator Index that can be used for reporting. This can be useful if you want to ensure for performance purposes or analysis of data consistency that the system is not using a BI Accelerator Index.

To Delete BI Accelerator Index Choose Continue. The System deletes the definition and settings of BI Accelerator Index in BI System and the logical Index and all indexes for tables of enhanced star schema of the infocube on BI Accelerator server.

To deactivate BI Accelerator index temporarily, choose BIA Index Properties. The BIA Index properties Dialog box appears choose inactive as status of BIA index and choose Enter.

Analyzing and Testing BI Accelerator Indexes

The Query Monitor, Execute+ Debug option, allows you to choose whether or not you would like to use BI Accelerator indexes for your test. This option provides a good method to test and analyze the query performance gain provided by BI Accelerator Index.

By selecting Display Statistics Data from Execute and De-bug in the query monitor (RSRT) the Query Runtime Statistics are displayed.

Query Monitor: RSRT

RFC Server time and Index server time can be displayed by linking the Data Manager UID from the Data Mgr Tab from Query Runtime Statistics in RSRT. To the data manager UID in table RSDSTATREXSERV

TrexRfcServer.trace:

- Total Time of RfcServer: 3325 [ms]
 - > RfcSvr Read Params: 0 [ms]
 - > RfcSvr Table Gen. : 0 [ms]
 - > ims_search_api : 1006 [ms]
 - > IndexSvr : 2316 [ms]
 - > RfcSvr Fill Result: 0 [ms]
- RfcDll Serialization : 12 [ms]

Conclusion

This is how we see that BI Accelerator Index improves the performance of BI queries ,when data is made from an Infocube as we have only one BI Accelerator Index for each Infocube and that's why OLAP Processor always excess active BI Accelerator Index and not Relational Aggregates.

Related Content

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