Performance Tuning on Infocube and Query

Performance Tuning in Infocube and Query:

Infocube:
Go to Cube Management -> Tab Performance:
Create Index
Create Statistics
On Tab -> Rollup you can create Aggregates.

Some Steps are like this :-

1) Turn on the BW Statistics: RSA1, choose Tools -> BW statistics for InfoCubes
   (Choose OLAP and WHM for your relevant Cubes)
2) Check whether you have overall query performance problem or Single Query Performance problem
   a) Overall query performance problem
      Use ST03N -> BW System load values to recognize the problem. Use the number given in table ‘Reporting - InfoCubes:Share of total time (s)’ to check if one of the columns %OLAP, %DB, %Frontend shows a high number in all InfoCubes.
      You need to run ST03N in expert mode to get these values
   2) Single/specific Query performance
      TX- ST03N
      Use Details to get the runtime segments

Possible causes for the performance

A) High Database Runtime
B) High OLAP Runtime
C) High Frontend Runtime

Depending upon your analysis

A) Strategy - High Database Runtime
   Check if an aggregate is suitable (use All data to get values “selected records to transferred records”, a high number here would be an indicator for query performance improvement using an aggregate)
   Check if database statistics are update to data for the Cube/Aggregate, use TX RSRV output (use database check for statistics and indexes)
   Check if the read mode of the query is unfavourable - Recommended (H)

B) Strategy - High OLAP Runtime
   Check if a high number of Cells transferred to the OLAP (use “All data” to get value “No. of Cells”) 
   a) Use RSRT technical Information to check if any extra OLAP-processing is necessary (Stock Query, Exception Aggregation, Calc. before Aggregation, Virtual Char. Key Figures, Attributes in Calculated Key Figs, Time-dependent Currency Translation) together with a high number of records transferred.
   b) Check if a user exit Usage is involved in the OLAP runtime?
   c) Check if large hierarchies are used and the entry hierarchy level is as deep as possible. This limits the levels of the hierarchy that must be processed.
   Use SE16 on the inclusion tables and use the List of Value feature on the column successor and predecessor to see which entry level of the hierarchy is used.

C) Strategy - High Frontend Runtime
   1) Check if a very high number of cells and formatings are transferred to the Frontend ( use “All data” to get value “No. of Cells”) which cause high network and frontend (processing) runtime.
   2) Check if frontend PC are within the recommendation (RAM, CPU Mhz)
   3) Check if the bandwidth for WAN connection is sufficient.

Thanks.

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