



BOOKARKS CAN SAVE PERFORMANCE - MICROSOFT POWER BI

How Bookmarks at Power BI can save
performance at the underlying datasource

All code and information are provided as it is and without warranty!

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How the bookmark feature at Power BI can save performance

Introduction

In many cases where I look to Microsoft Power BI Reports that are created by customers, I see many tables at one page for different consumer groups. The intention in the most cases is to create insights from the different views of the data for the different report consumers. The consumers are in the most cases from different business units and so they need different perspectives than other consumer group. So the report author decides to create on one page different perspectives with different visuals, e.g. tables, to meet the requirements of all consumers.

My first opinion is to create different reports, which are using the matching data source (e.g. perspectives on a Tabular Cube) and to create different pages in the same report or better, create matching reports. But this is mainly not good to handle for the report author, so he must maintain more than one report / pages and must synchronize the content / visuals etc.

So, but where is the performance impact when you display multiple tables on one page in a report?

Imagine you get a requirement to create a report that displays two tables, on table for the sales, and the second one for customer service. Both tables' displays the same measures, and the only opposites is by the order and the dimension columns. The other visuals and slices on the report page are the same. So the report author decides to create one page in a report, because there are mainly the same data and so he has not more to maintain if there are any changes.

ModelName	ExtendedAmount	Freight	OrderDateKey	OrderQuantity	ProductStandardCost	PromotionKey	RevisionNumber
All-Purpose Bike Stand	39.591 €	989,7749999999999 €	249	249	14.807,034 €	249	249
Bike Wash	7.218,6000000000004 €	180,5104 €	908	908	2.699,7564000000002 €	908	908
Classic Vest	35,687 €	892,1749999999995 €	562	562	13.346,938 €	562	562
Cycling Cap	19,688,099999999999 €	492,31200000000001 €	2190	2190	15.159,837 €	2190	2190
Fender Set - Mountain	46,619,5800000000002 €	1.165,4894999999999 €	2121	2121	17.435,680499999999 €	2121	2121
Half-Finger Gloves	35,020,699999999997 €	875,58900000000006 €	1430	1430	13.097,7990000000001 €	1430	1430
Hitch Rack - 4-Bike	39,360 €	984 €	328	328	14.720,639999999999 €	328	328
Total	29.358,677,220699999 €	733.969,6091 €	60398	60398	17.277,793,5757 €	60398	60398

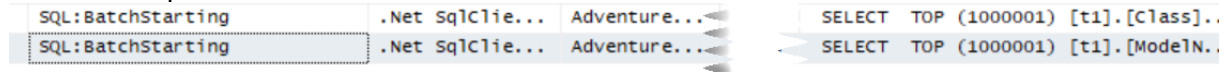
Status	ExtendedAmount	Freight	OrderDateKey	OrderQuantity	ProductStandardCost	PromotionKey	RevisionNumber
Current	12.834,218,5407 €	320,855,66930000001 €	5428	5428	7.596,609,67040000002 €	5428	5428
Total	29.358,677,220699999 €	733.969,6091 €	60398	60398	17.277,793,5757 €	60398	60398

Picture 1 Report Content

Okay, everything fine? Yes, the report author and the users are happy. And the underlying report server and / or data source

server? The server must handle for each visual a query. If a sales user displays the report, the report pushes also a query for the customer service table to the data source, and vice versa the same.

The server is not fine with this solution, because the server must handle queries for users that not use the results...



Picture 2 Queries via profiler

But what is a good compromise for the report author and the server? --> Bookmarks? Yes, I think so.

You can create for every table a bookmark, hide the other table when showing the other one and control the visibility via buttons.

Further Information about bookmarks:

<https://docs.microsoft.com/en-us/power-bi/desktop-bookmarks>

<http://radacad.com/bookmarks-and-buttons-making-power-bi-charts-even-more-interactive>

When you display the table for the sales person, you fire a query for this table against the server, but if the other table are hide, you will not fire the query against the server for this table. By this use case the server is also fine :-)

Conclusion

If the requirement is to maintain one report, with pages that displays the same data, but with different perspectives for different consumer groups, you can control the queries with bookmarks and save performance.

But if you have the choice, consider creating different perspectives with corresponding pages, or better create different reports which are fits the requirements for the respective consumer group.

But a consultant used to say: "It depends!" :-)