

Deploying Crystal Reports on Top of a SAP BI Query



Applies to:

SAP BI NetWeaver 2004s, Crystal Reports 2008. For more information, visit the [Business Intelligence homepage](#).

Summary

The objective of the article is to outline the basic steps of integration followed while creating a simple report using crystal reports 2008 on top of a SAP BI query.

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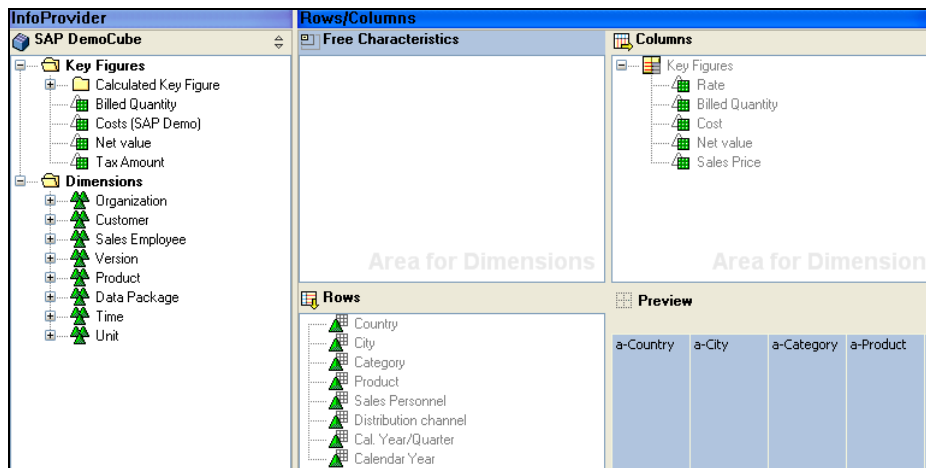
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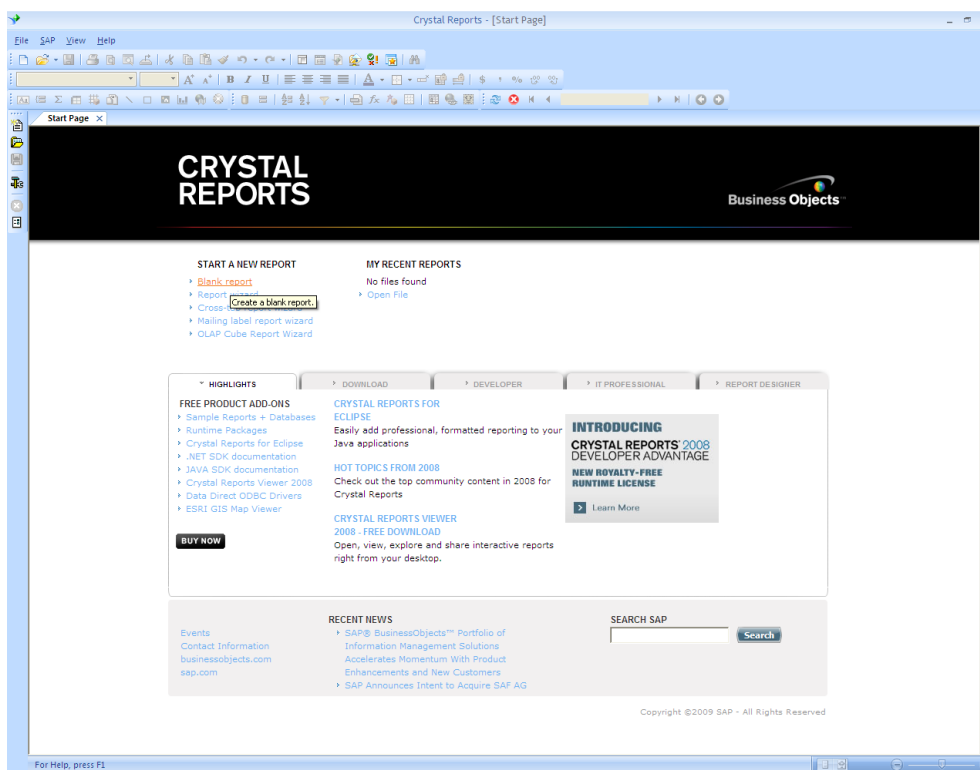
Pre-Requisites

SAP BI query built on top of an info-provider will be used to act as a feeder to Crystal Report. As a standard best practice SAP recommends keeping all our intelligence at the BI end leveraging the OLAP functionalities and making use of Crystal Reports as a solution for highly formatted reports. A dummy query made to showcase the steps involved is as below:

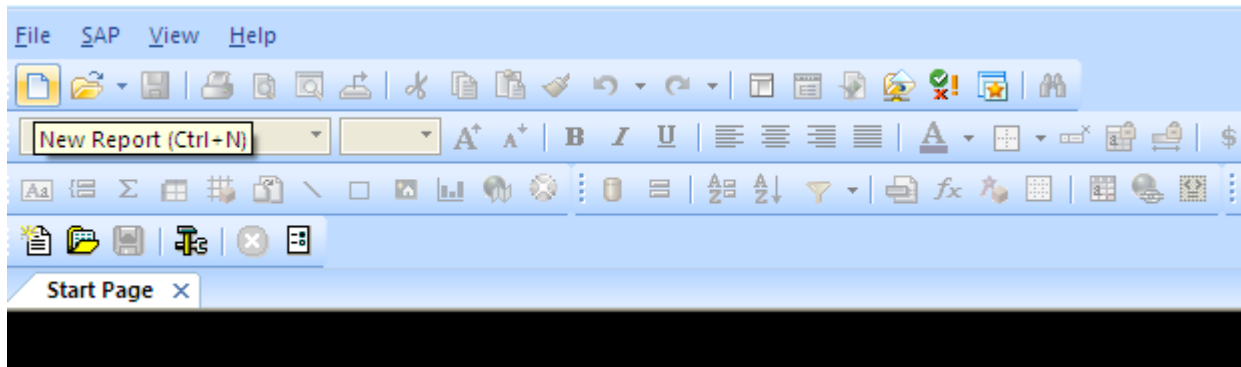


Steps Involved in Creating a basic Crystal Report on top of SAP BI Query

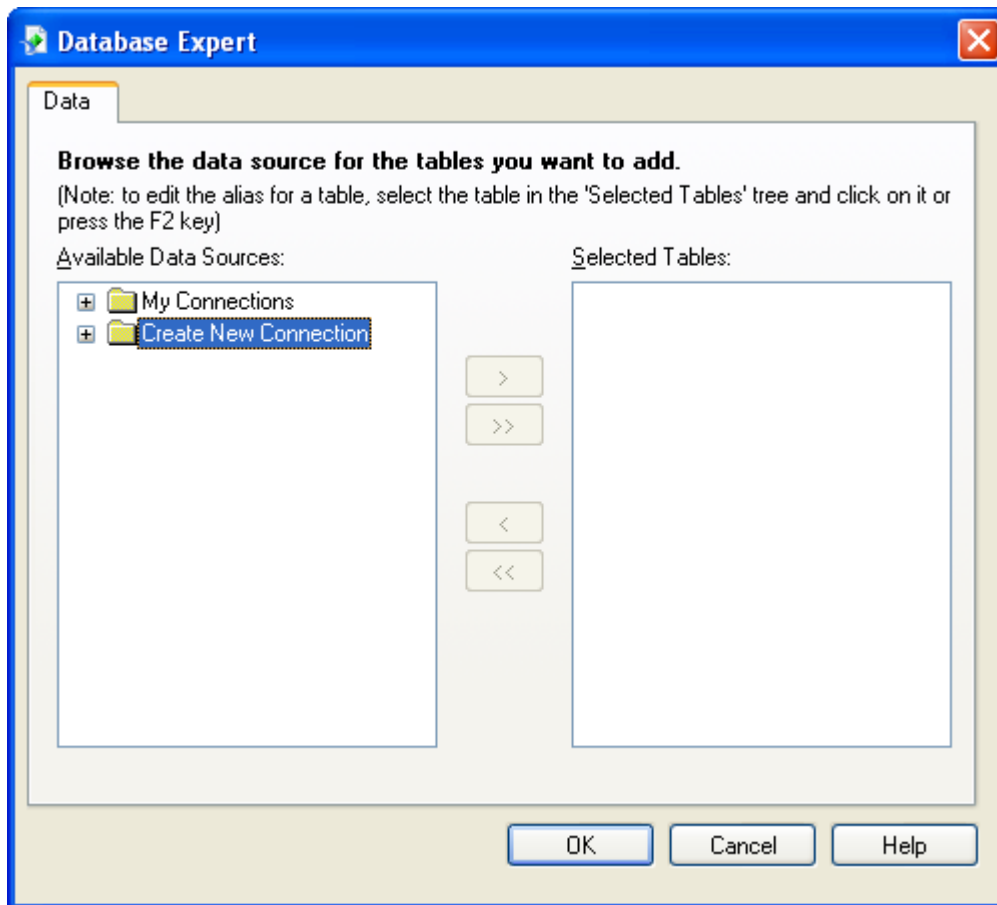
1. Log onto Crystal Reports 2008 to have a window as below open



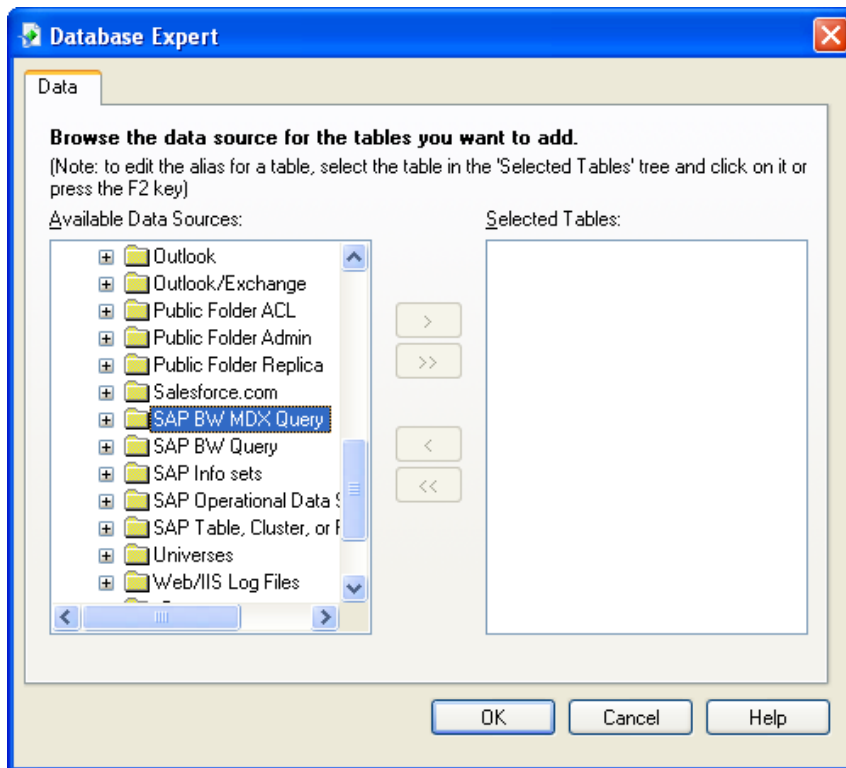
2. Click on new report icon a new POP up window will open.



3. Double click on create new connection

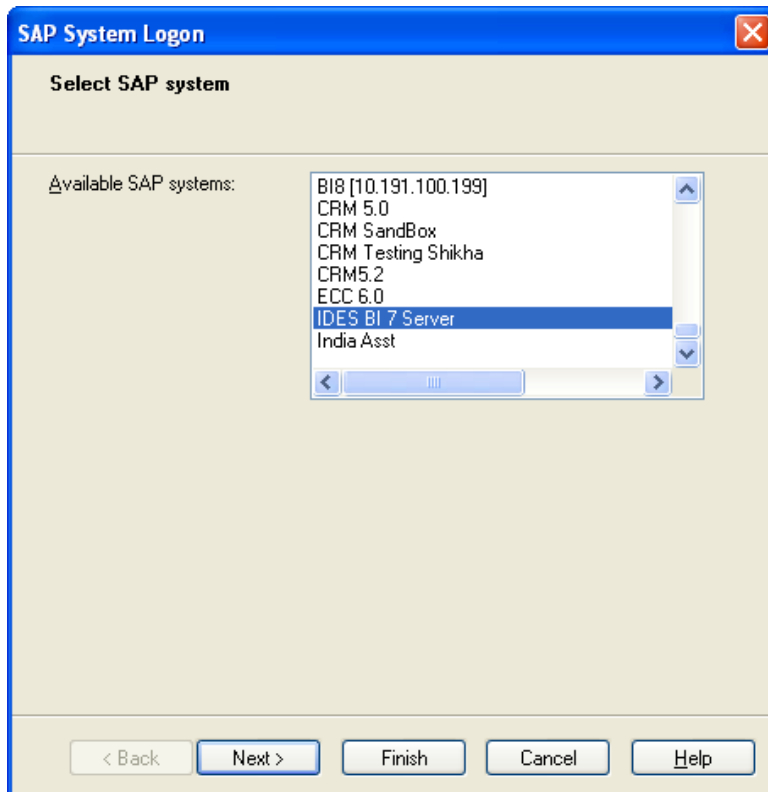


4. Double Click on SAP BW MDX query. A window having information of all the servers will open.

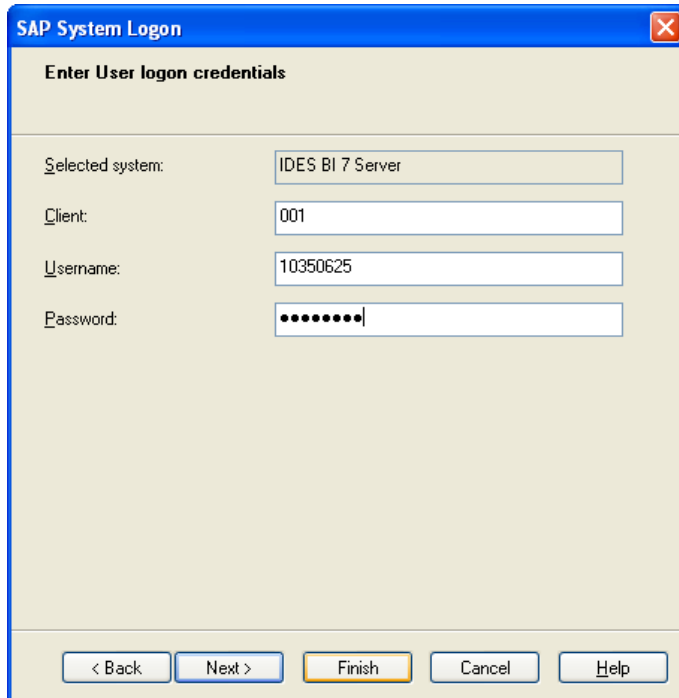


SAP recommends using BW MDX connection when fetching data from a SAP BI query as BW MDX driver is able to leverage a BW query with two structures and also shows display attributes.

5. Select the relevant system and double click. In our case we chose IDES BI 7



6. Fill the login details. Connection of crystal report with BI 7 Ides server will be up and running.

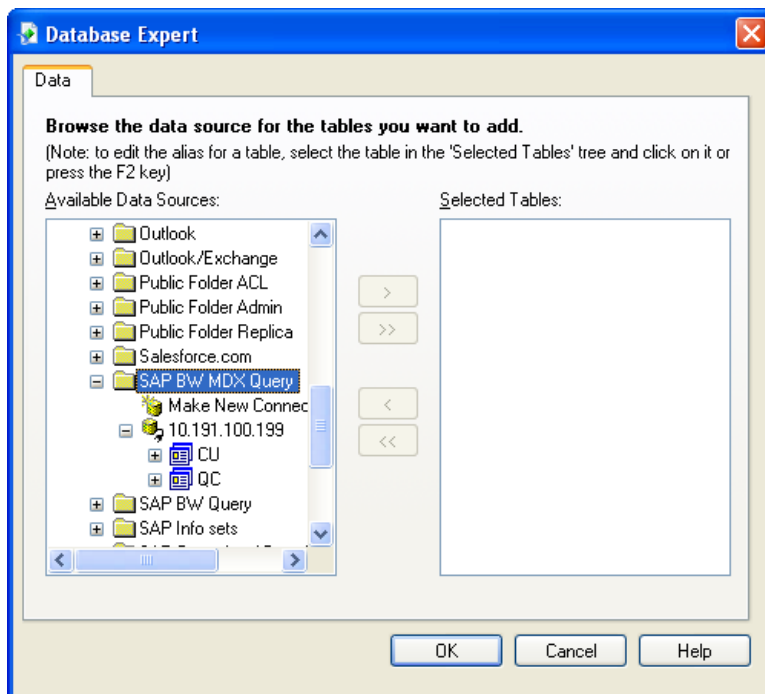


The screenshot shows the 'SAP System Logon' dialog box with the following fields filled:

- Selected system: IDES BI 7 Server
- Client: 001
- Username: 10350625
- Password: [masked with dots]

Buttons at the bottom: < Back, Next >, Finish, Cancel, Help.

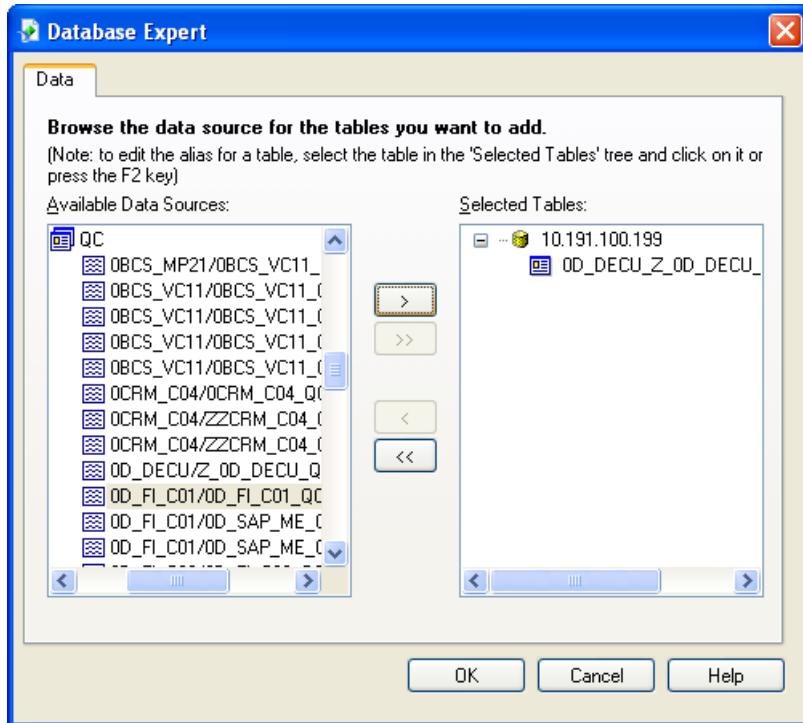
7. Under new created connection, you will have all your queries and cubes created in that system available for further reporting.



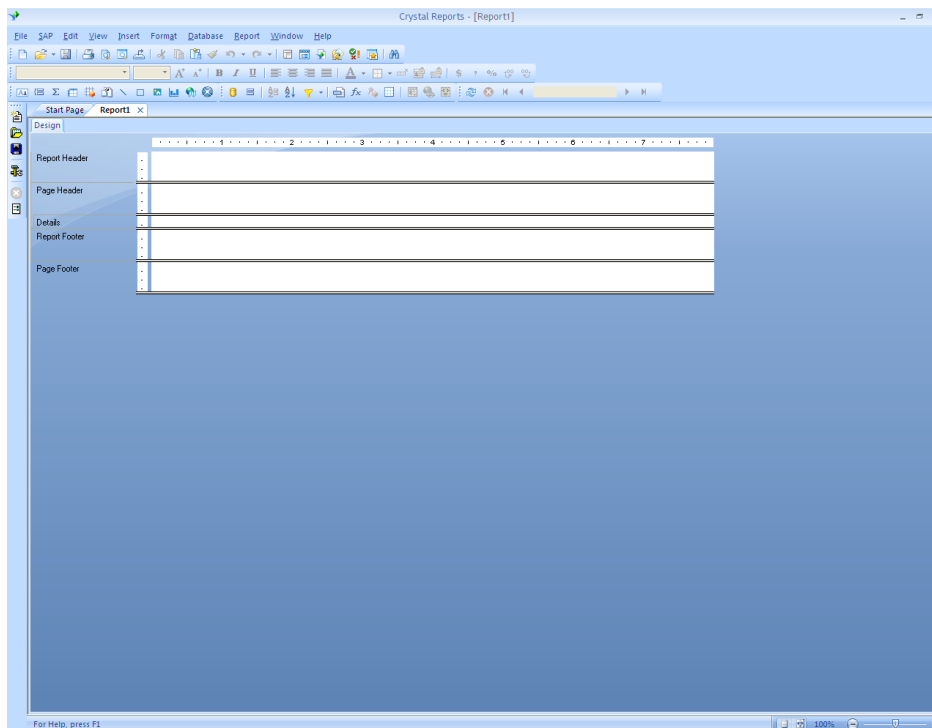
The screenshot shows the 'Database Expert' dialog box with the following details:

- Tab: Data
- Instruction: Browse the data source for the tables you want to add.
- Note: (Note: to edit the alias for a table, select the table in the 'Selected Tables' tree and click on it or press the F2 key)
- Available Data Sources: A tree view showing folders like Outlook, Public Folder ACL, etc., and a sub-tree for '10.191.100.199' containing 'CU' and 'QC'.
- Selected Tables: An empty list box.
- Navigation buttons: >, >>, <, <<
- Buttons at the bottom: OK, Cancel, Help.

8. Expand the query node to find out the appropriate bex query and move that to right hand side by clicking on right pointed arrow button. Click on OK button



9. Further, Crystal Report editor will open up as below:



The Design tab is divided into five sections:

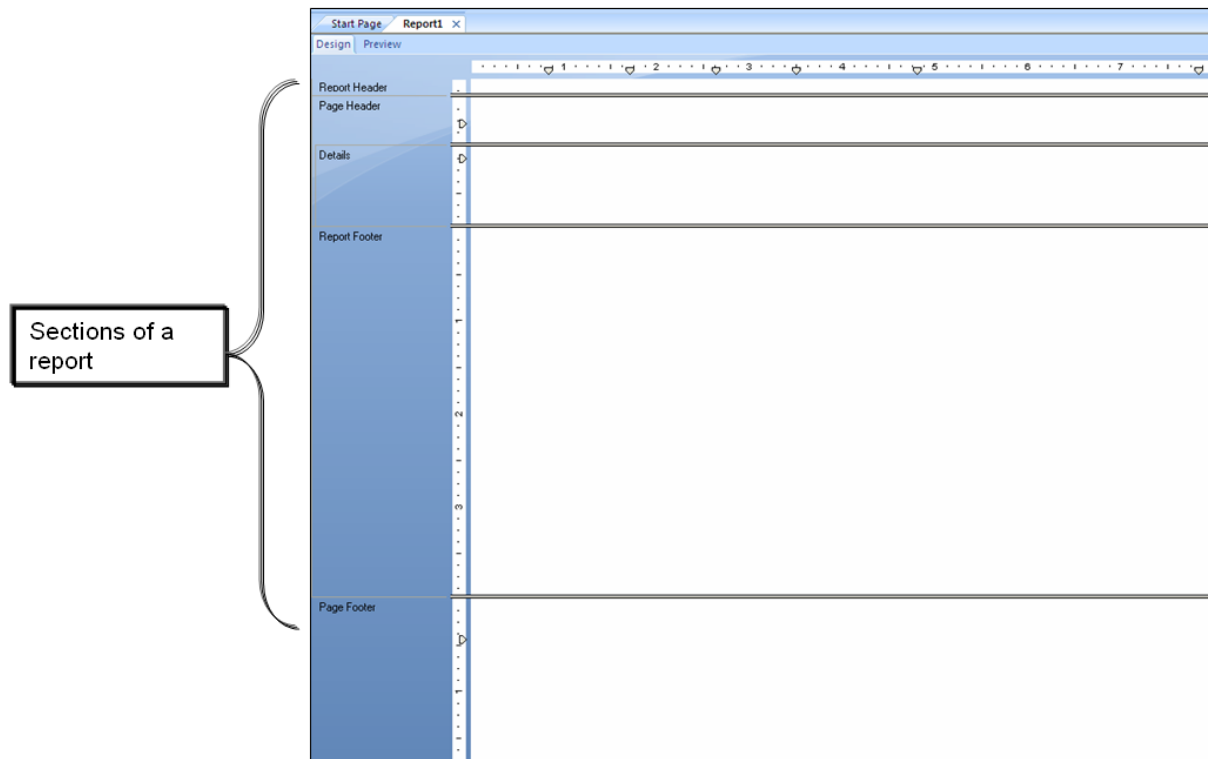
Report Header (RH) : Used for the report title and information need to be displayed at the beginning of the report

Page Header (PH) : Used to put information at the top of the page i.e chapter name , column headings

Details (D) : Used for the body of the report, and it is printed once per record. The bulk of the report data generally appears .The bulk of the report data generally appears in this section

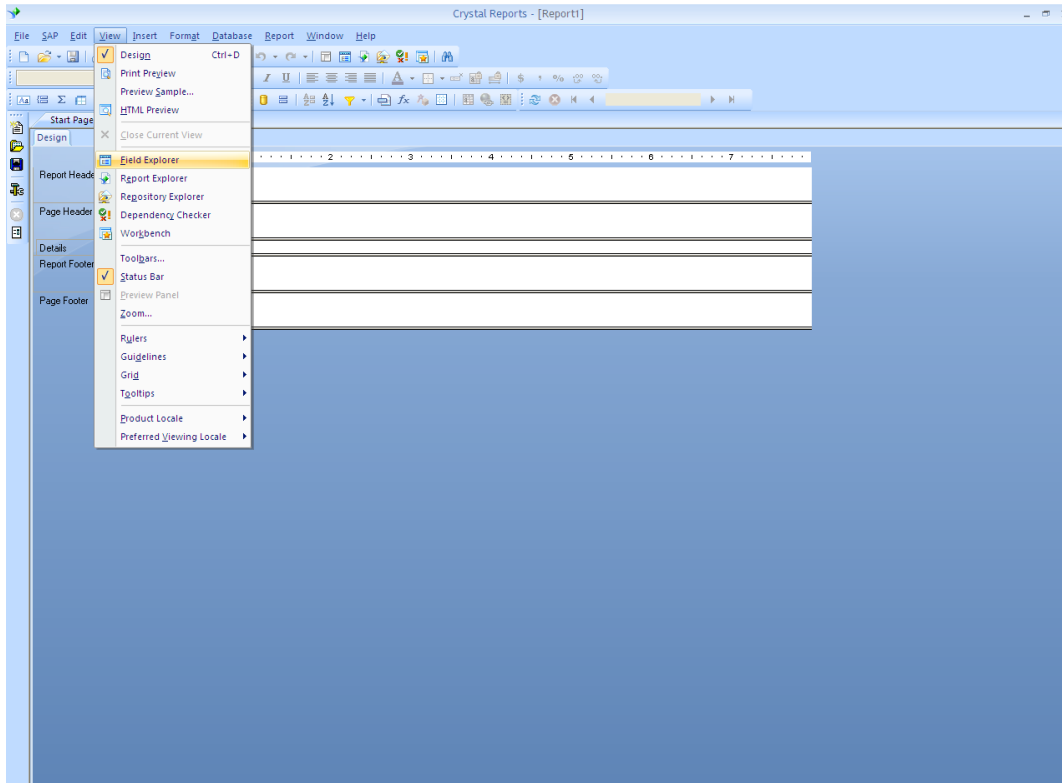
Report Footer (RF) : Used for information you want to appear once at the end of report

Page Footer (PF) : Used to contain information you want to appear at the end of each page like page header , author

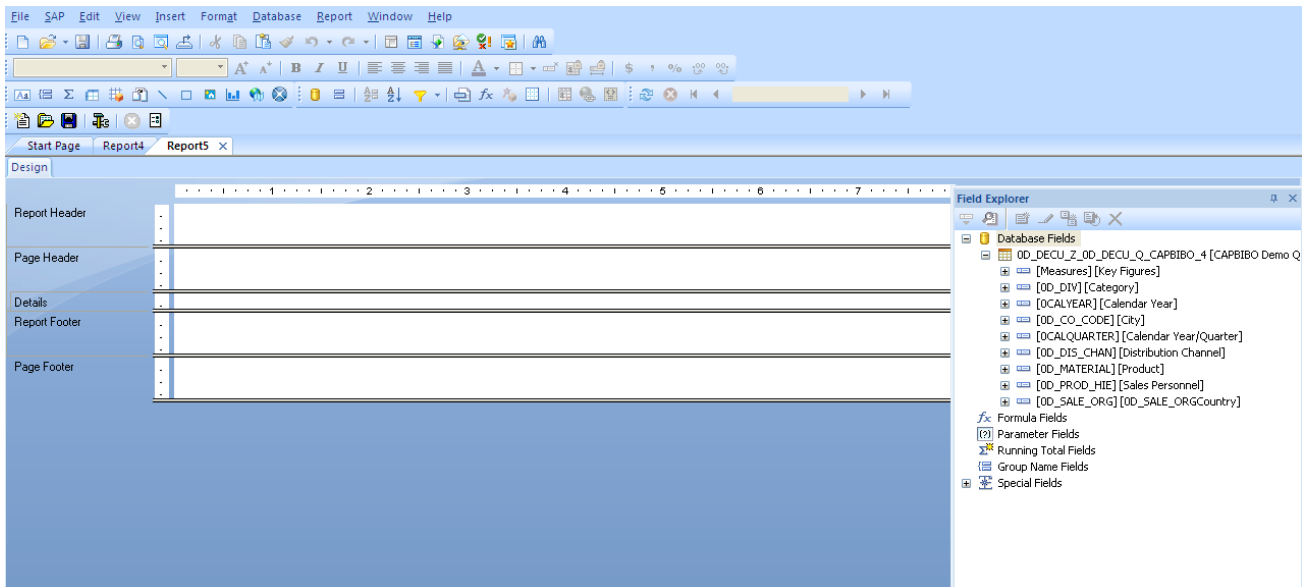


10. Select View-> Field Explorer

The **Field Explorer** view is used to insert, modify, or delete fields on the Layout page of **Crystal Reports**.

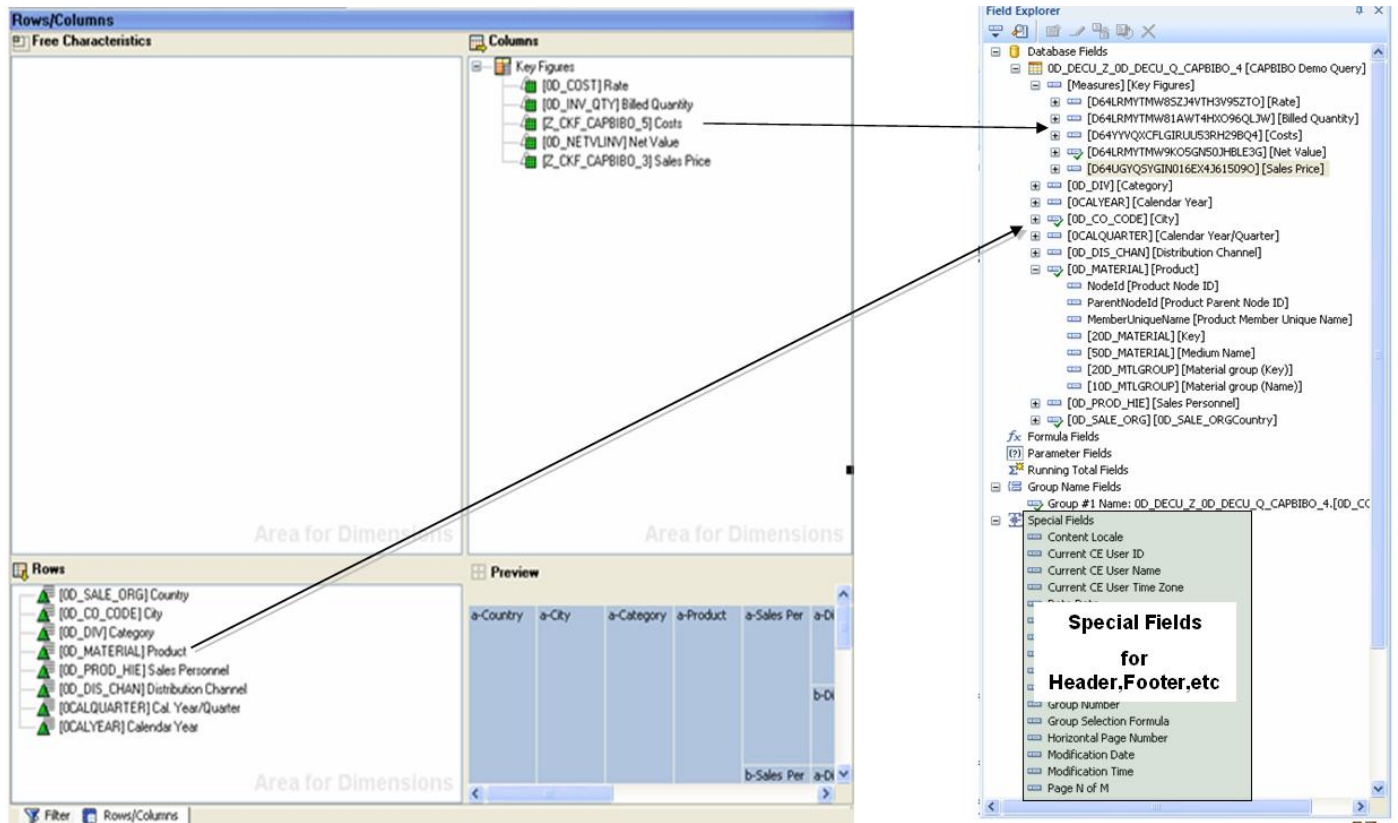


11. Expand the data base field node in the field explorer dialog box and then expand query.



The mapping of elements in BeX query designer and Crystal reports field explorer is as below:

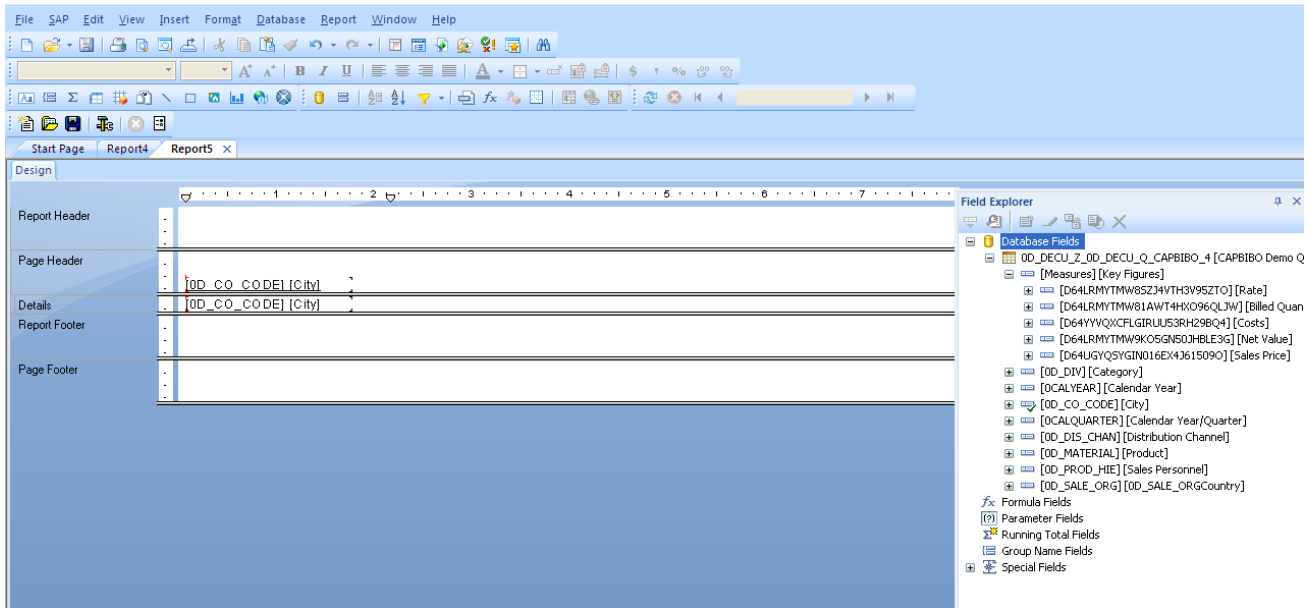
- Each characteristic in the query will result in an element in the field explorer with a key & a description field.
- Each navigational attribute in the query will result in an element in the field explorer with a key and a description item (for example, Regional Code and Area Code).
- Each display attribute will create an element in the field explorer underneath the corresponding characteristic (for example, Customer number with several display attributes).
- Crystal Reports will include all available display attributes for the characteristic and not only the display attributes that are included in the SAP BW query.



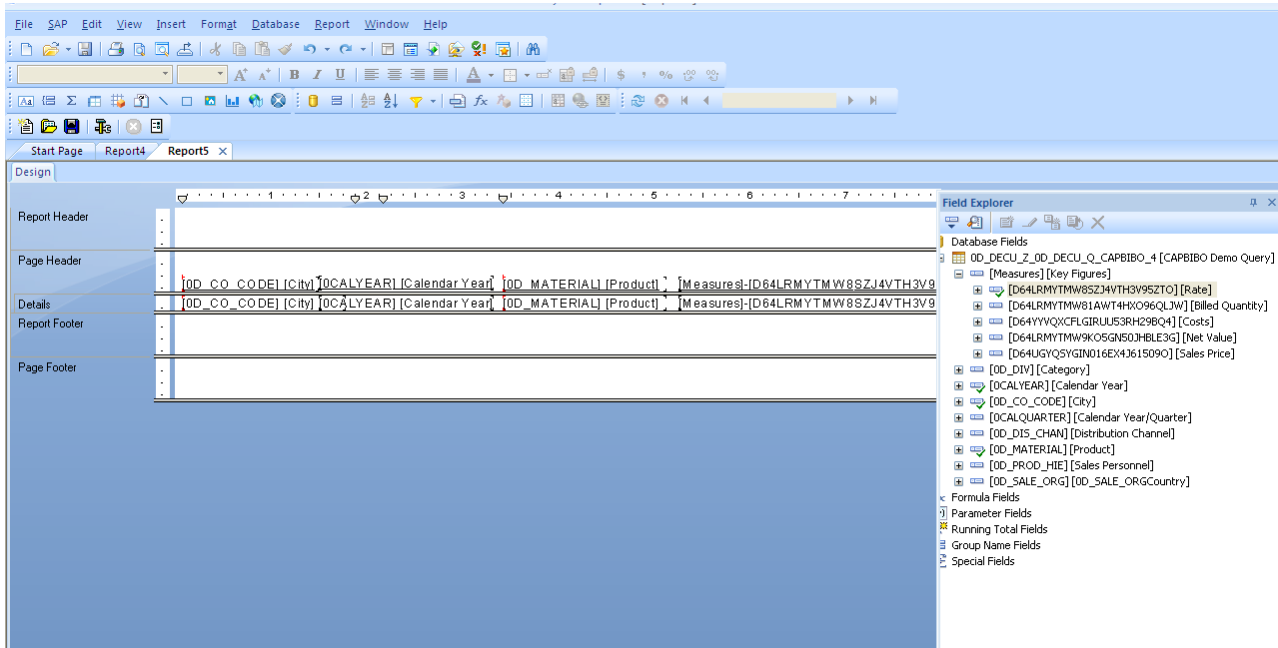
12. Drag the desired fields (company code in this case) into detail section of the design tab. An object frame appears with the arrow cursor as you drag the field onto the report.

- The object frame represents the object you have just selected for placement.
- The size of the object frame approximates the size of the data in the field selected.

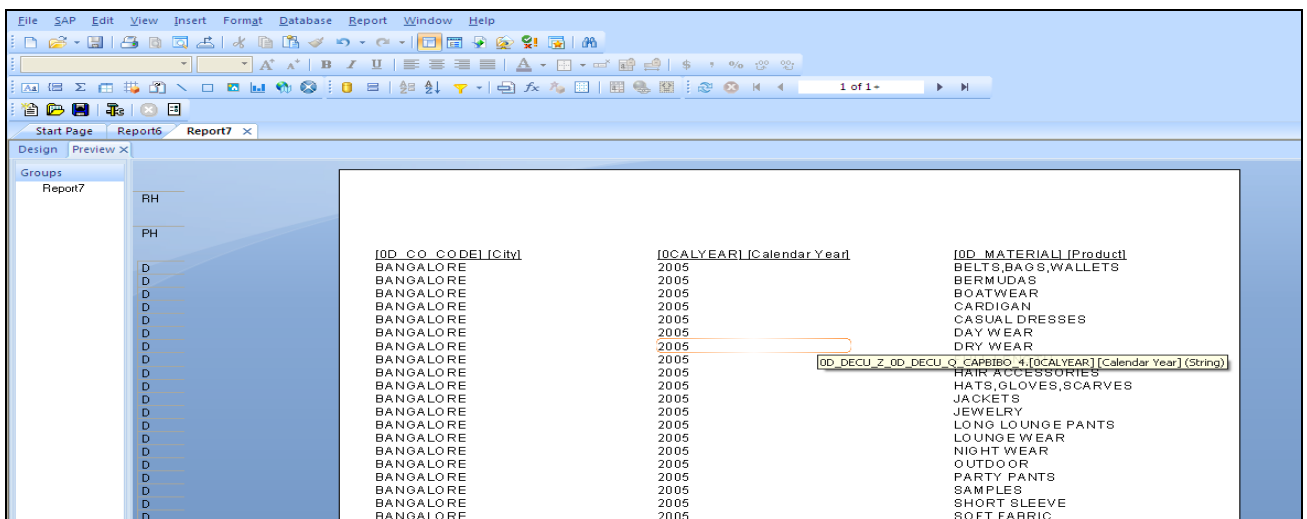
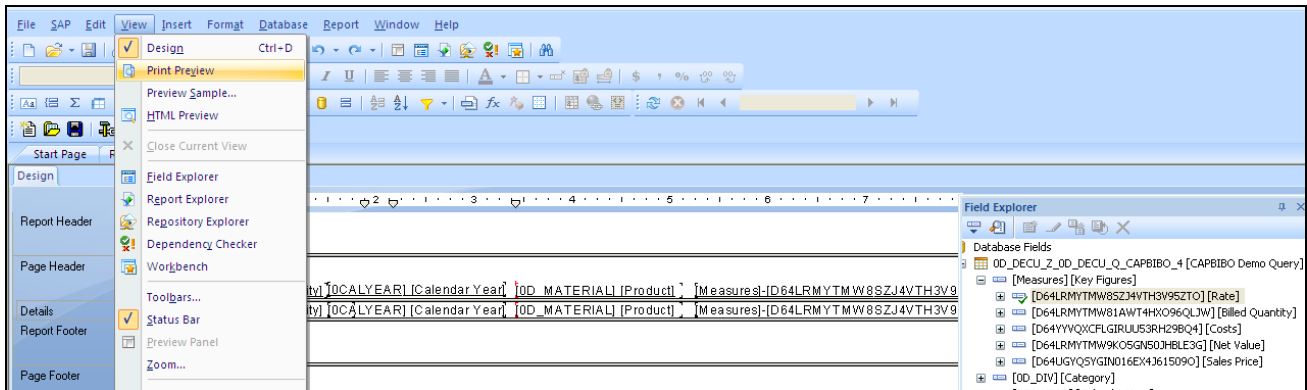
Move the object frame as far to the left as you can in the detail section. In case you move the field too far to the left. The arrow cursor turns into a stop cursor indicating that you can not drag the field that far. You can not place any object outside the page margin.



13. In a similar way, drag other desired characteristics 0CALYEAR, 0D_MATERIAL, RATE, QUANTITY and Net value fields to the right of company code in the same order.



14. Preview the report by clicking print preview on the standard tool bar (or View -> Print Preview in the menu). To activate print preview tab, it is required to select print preview while previewing it first time. Preview tab appears right to the design tab and you can switch between the two by clicking the corresponding tab.



Following the above steps one can create a basic report using crystal reports 2008 on top of SAP BI query. Further improvisation to the report would depend on the requirements. One can add charts, graphs, map navigation, integrate the crystal document with other interactive items like Xcelsius components.

Related Content

Further Reading & References

[Business Objects Integration Kit for SAP - Crystal Reports 2008 by Ingo Hilgefort](#)

[Formatted Reporting: Crystal Reports Integration](#)

[Crystal Reports 2008 SP1 User's Guide](#)

For more information, visit the [Business Intelligence homepage](#).

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