SAP and Non-SAP Data Integration for BusinessObjects Reporting

Applies to:

SAP BusinessObjects Enterprise XI 3.0, SAP BusinessObjects Enterprise XI 3.1 all support packs.

For more information, visit SAP BusinessObjects.

Summary

This document describes the integration approach/process of SAP data and Non-SAP data to see the combined data at report level or at dashboard. There are different approaches to achieve this. In this document, the BusinessObjects-Centric Approach and its advantages is focused upon. Other approaches and their advantages will be explained in future articles.

Author: Ramakrishna Kamurthy

Company: Sita Corp India Pvt. LTD.

Created on: 18 February 2010

Author Bio

Ramakrishna Kamurthy works in SITA CORP (IN) Pvt. Ltd. as SAP BI/BOBJ Consultant with over four years of SAP experience. He has an End-to-End experience in SAP Data Archiving Implementation.

Table of Contents

Scenario

To report on data which comes from different systems like two or more in BusinessObjects (BOBJ), defining the right integration approach as per product(s) availability is very important. A different approach has different advantages, limitations and additional product utilization / need additional license. In this scenario, I am going to explain the list of approaches to integrate SAP and Non-SAP data, possible areas of integration, what are the advantages, limitations, cost and efforts for each approach.

In this example, I develop a dashboard which shows sales information by company code wise. Here some company codes data are available in SAP BI 7.x and other company codes data are available in non-SAP (for example, flat files). Every end of the month the data updates in SAP for SAP company codes, and new files are replaced in a directory for non-SAP company codes. In this scenario, I used the BusinessObjects Centric Approach to integrate SAP and non-SAP data to show historical data at dashboard.

Integration Approaches

The following are the three approaches to integrate SAP and Non-SAP data as per the requirements and products availability.

- SAP BI Centric Approach
- SAP Centric Approach
- SAP BusinessObjects Centric Approach

In this article, I show how the BusinessObjects Centric Approach works with an example, its advantages and limitations.

BusinessObjects Centric Approach

When BusinessObjects Enterprise system combines both SAP and non-SAP data, it is called the BusinessObjects Centric Approach. In situations where we are not interested to do new developments on the SAP side, this is the best approach to integrate SAP and non-SAP data.

Steps Involved

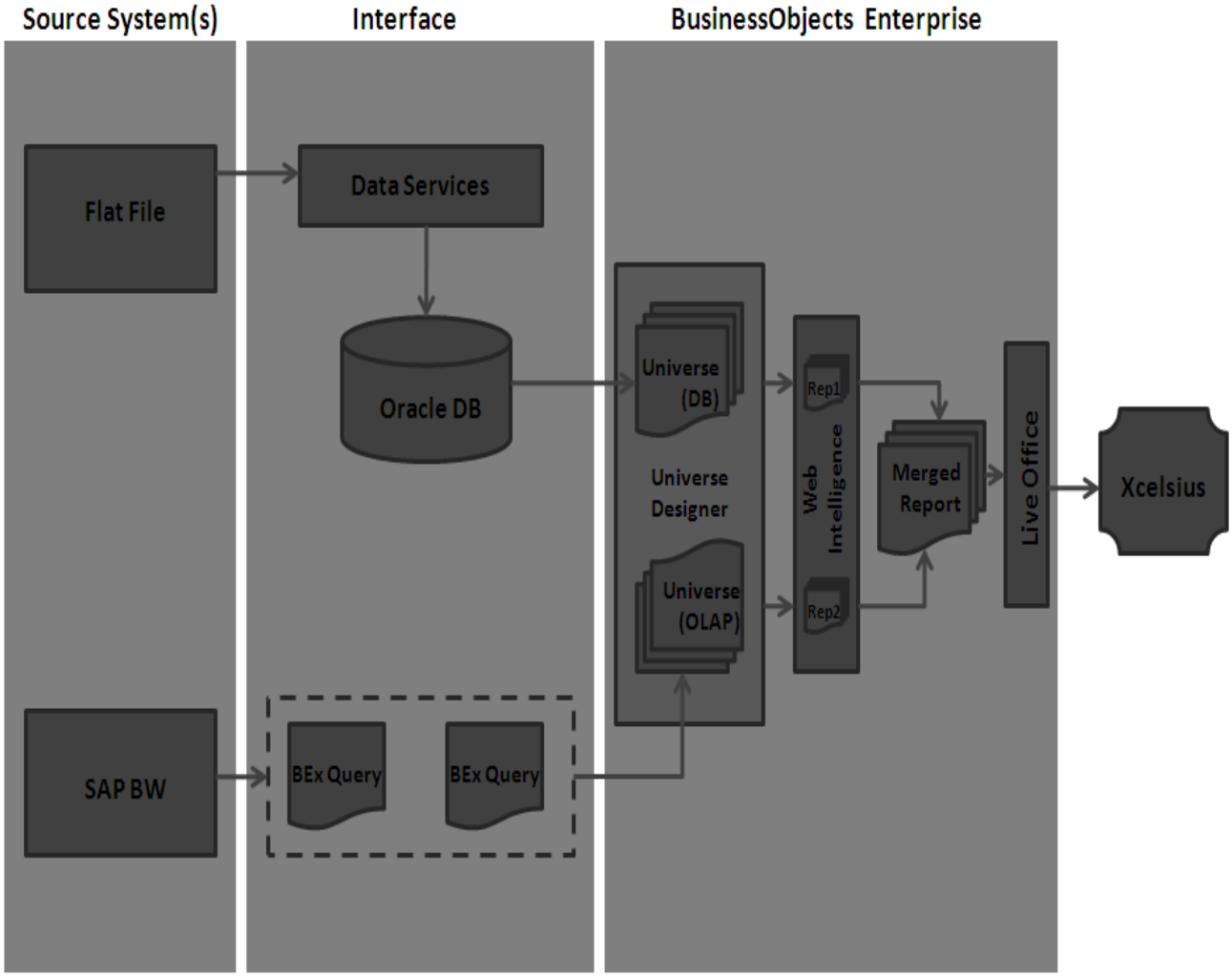
1. Load all Non-SAP Data into a database using SAP BusinessObjects Data Services.
2. Design and Operational Universe on top of the database where non-SAP data resides.
3. Develop a Web Intelligence report on operational universe.
4. Develop a BEx query as per dashboard requirement on InfoCube.
5. Generate an OLAP Universe on top of BEx query.
6. Develop a Web Intelligence report on OLAP Universe.
7. Combine two reports using Merge Dimensions.
8. Bring the report output to Xcelsius using Live Office Connector.

Tools Involved

- SAP BusinessObjects Data Services 3.0 or above
- SAP BOE XI 3.0 or above
- SAP BusinessObjects Web Intelligence
- SAP BOBJ Xcelsius 2008 or above

Data Flow Architecture

The following picture shows how data is flowing from different systems, at what level integration is done and how data is brought into Xcelsius.



Step by Step Solution

SAP BI Centric Approach

1. Create a BEx query (Company code wise Sales information) in BI system (already cube is available).

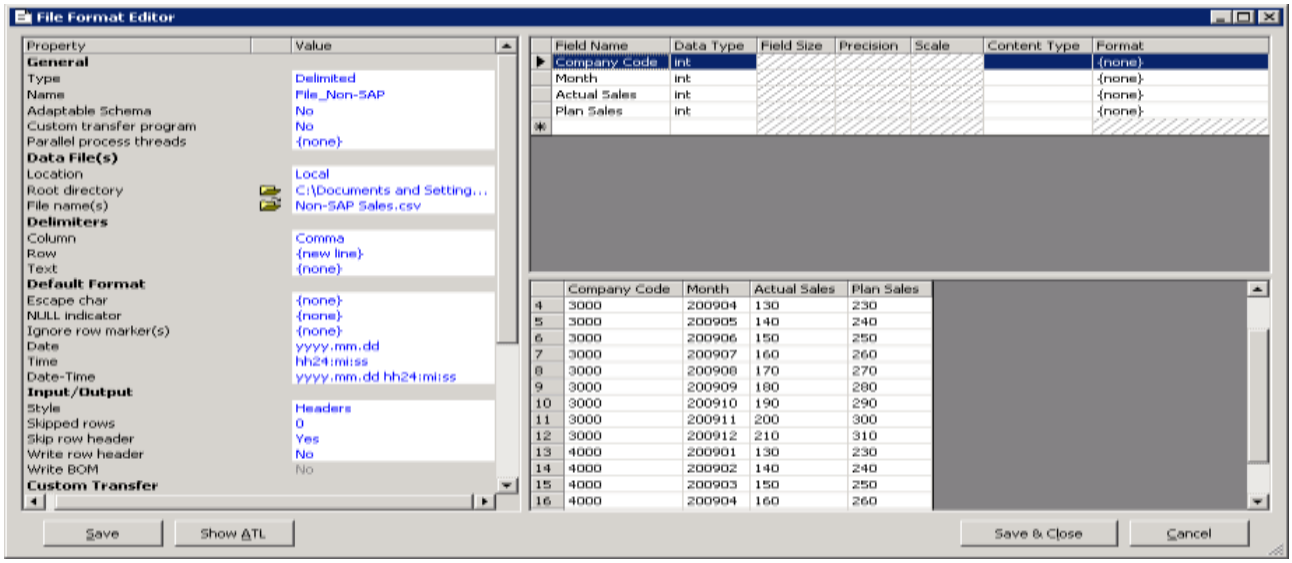
Company Code		Cal. year / month	Actual Sales	Planned Sales
1000	1000	JAN 2009	$ 3,000.00	$ 3,600.00
		FEB 2009	$ 4,500.00	$ 3,600.00
		MAR 2009	$ 6,000.00	$ 6,600.00
		APR 2009	$ 3,600.00	$ 3,000.00
		MAY 2009	$ 4,500.00	$ 3,900.00
		JUN 2009	$ 4,200.00	$ 3,000.00
		JUL 2009	$ 3,000.00	$ 1,500.00
		AUG 2009	$ 6,000.00	$ 3,750.00
		SEP 2009	$ 2,250.00	$ 3,600.00
		OCT 2009	$ 11,100.00	$ 6,300.00
		NOV 2009	$ 5,100.00	$ 5,400.00
		DEC 2009	$ 7,200.00	$ 3,900.00
		Result	$ 60,450.00	$ 48,150.00
2000	2000	JAN 2009	$ 9,000.00	$ 8,100.00
		FEB 2009	$ 4,500.00	$ 7,500.00
		MAR 2009	$ 3,600.00	$ 2,250.00
		APR 2009	$ 12,300.00	$ 10,200.00
		MAY 2009	$ 6,900.00	$ 9,600.00
		JUN 2009	$ 3,600.00	$ 10,200.00

2. Allow / release query to access from BusinessObjects and save.

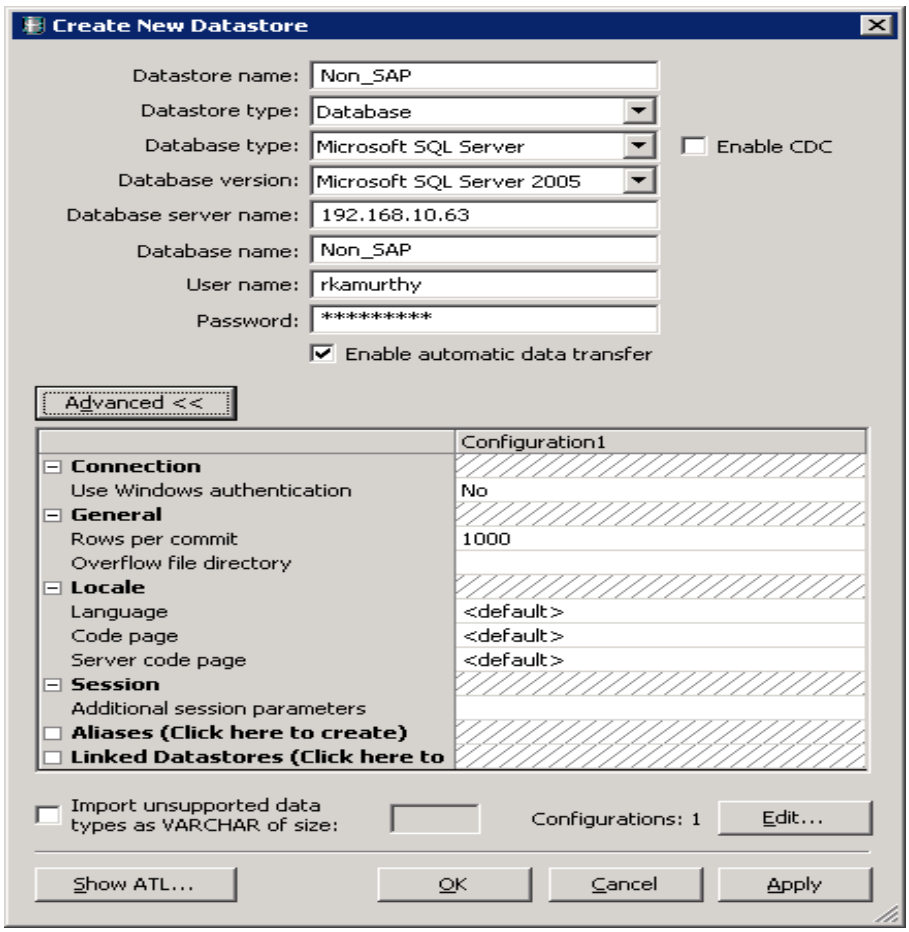
SAP Centric Approach

1. Create a Data Services Project to load Non-SAP data into a database.

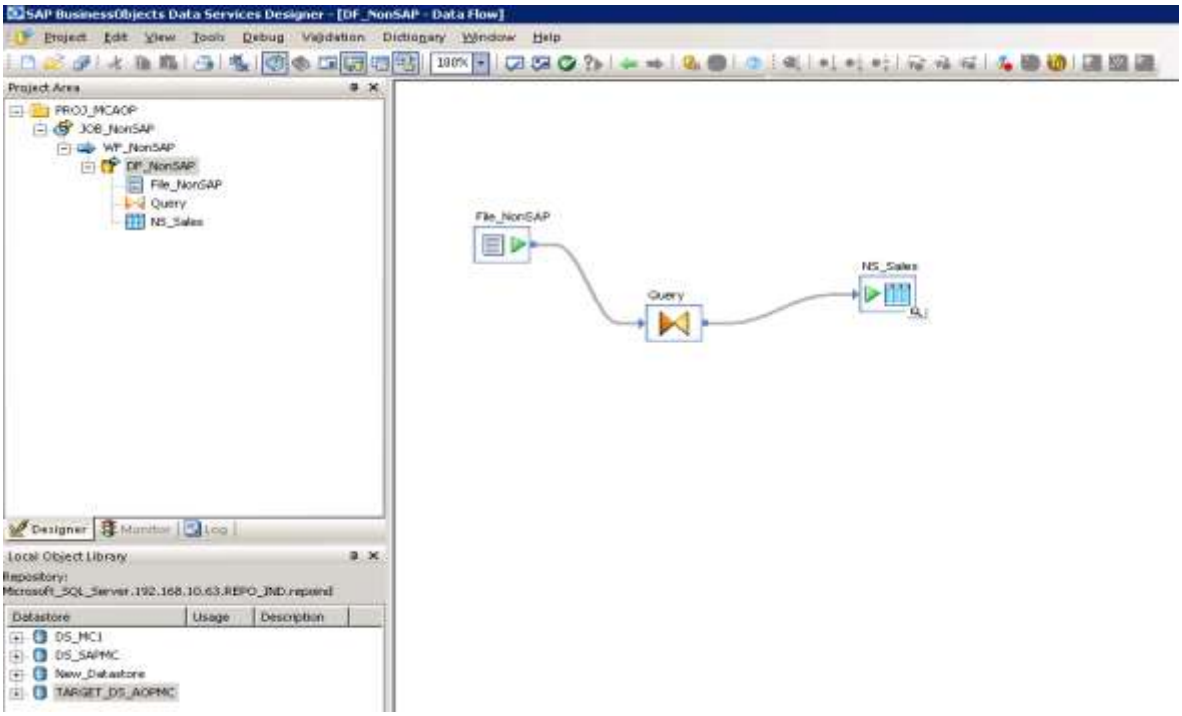
   I. Define the file format



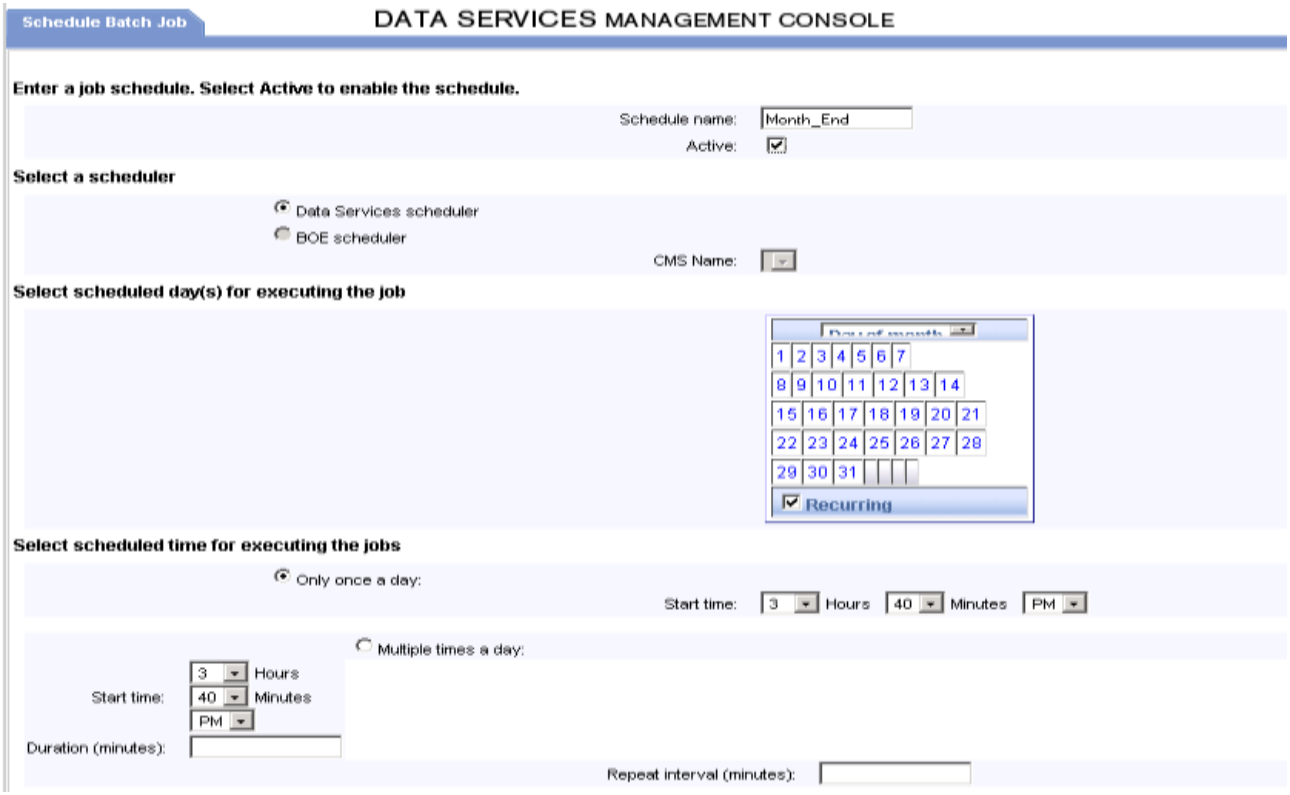
   II. Define the target Datastore where you want to load data.



III. Define the ETL project to load data in flat file to target database.



2. Schedule the Data Services ETL job every month end to extract new data using Data Service Management Console.



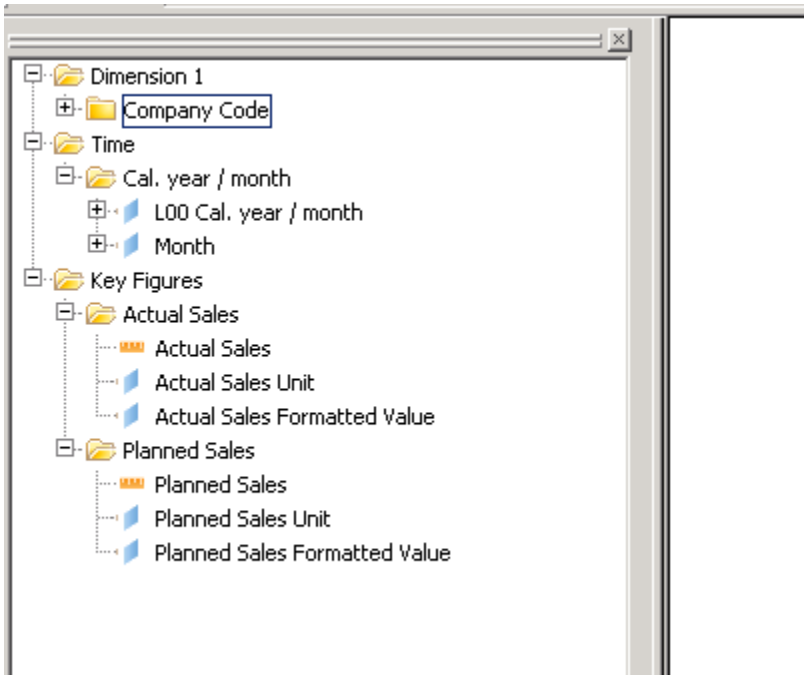
3. Check the data in the target database.

Table - dbo.BOBJ_CEN | Table - dbo.BOBJ_CEN | Summary

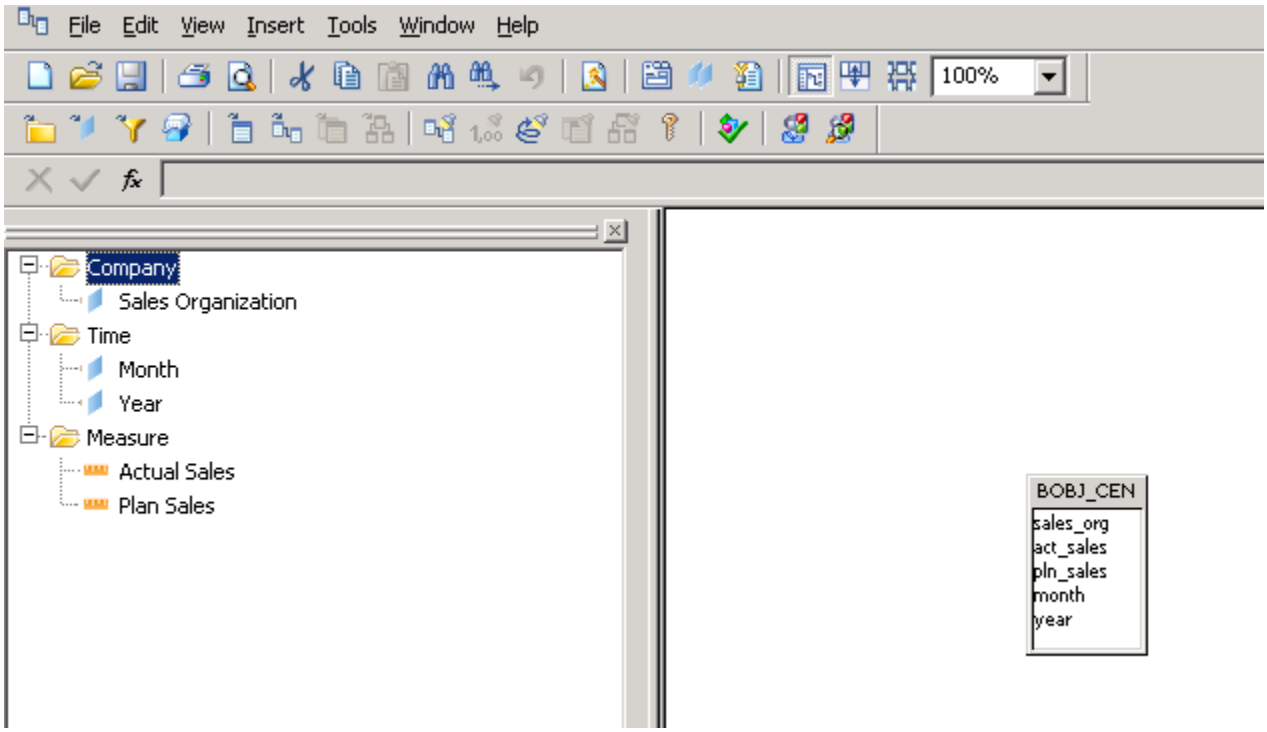
c_code	act_sales	pln_sales	month	year
3000	1000.0000	500.0000	1	2009
3000	2000.0000	1250.0000	2	2009
3000	750.0000	1200.0000	3	2009
3000	3700.0000	2100.0000	4	2009
3000	1700.0000	1800.0000	5	2009
3000	2400.0000	1300.0000	6	2009
3000	3000.0000	2700.0000	7	2009
3000	1500.0000	2500.0000	8	2009
3000	1200.0000	750.0000	9	2009
3000	4100.0000	3400.0000	10	2009
3000	2300.0000	3200.0000	11	2009
3000	1200.0000	3400.0000	12	2009
4000	4100.0000	3400.0000	1	2009
4000	2300.0000	3200.0000	2	2009
4000	1200.0000	3400.0000	3	2009
4000	2600.0000	1500.0000	4	2009
4000	1900.0000	2500.0000	5	2009
4000	2700.0000	3500.0000	6	2009
4000	2900.0000	2300.0000	7	2009
4000	2200.0000	2500.0000	8	2009
4000	1100.0000	1300.0000	9	2009

SAP BusinessObjects Centric Approach

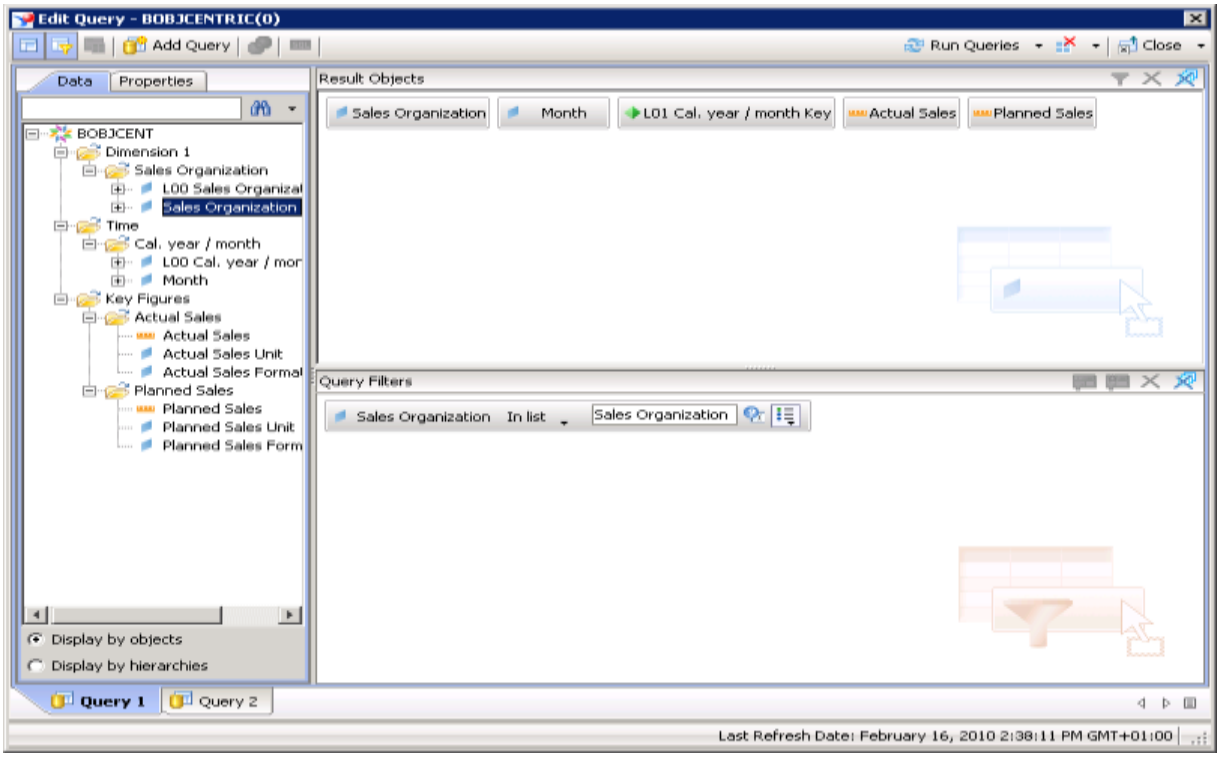
1. Generate an OLAP universe on the BEx query which we created above.



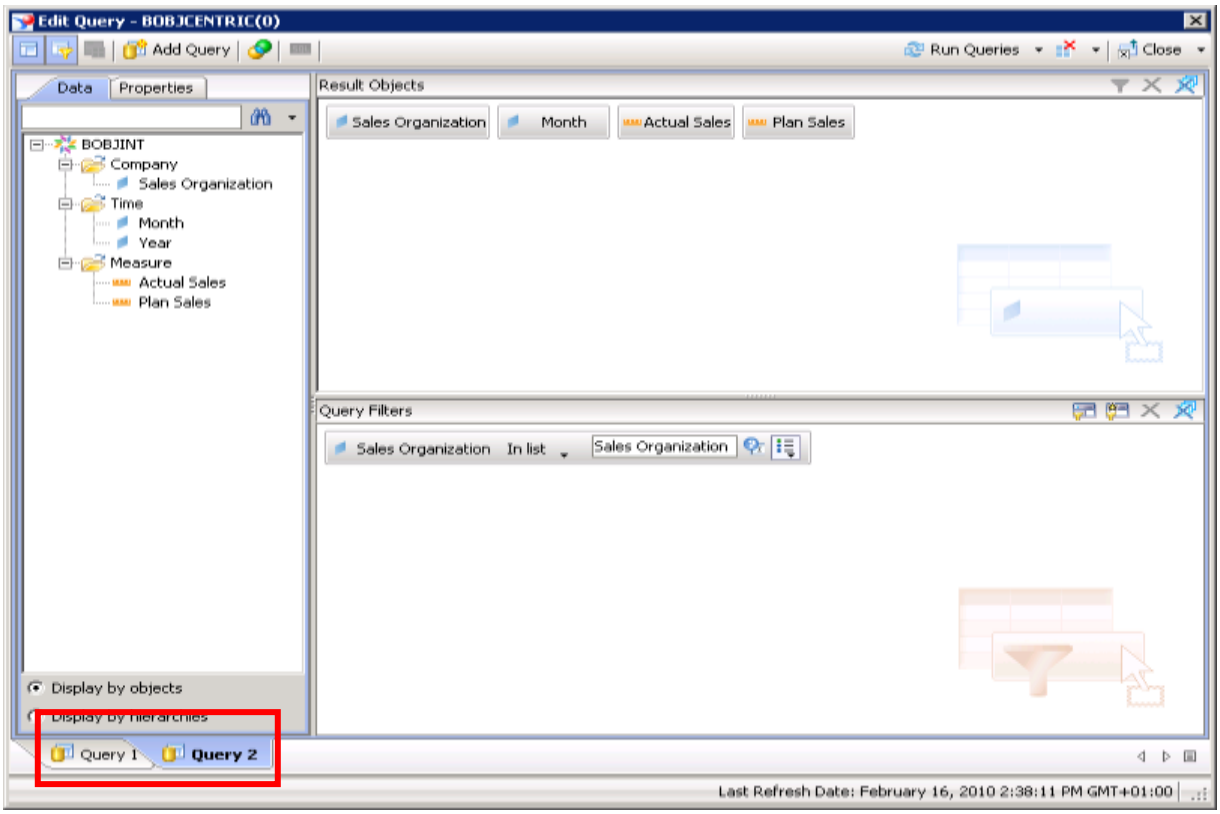
2. Design an operational universe on target database tables where we loaded non-SAP data using Data Services.



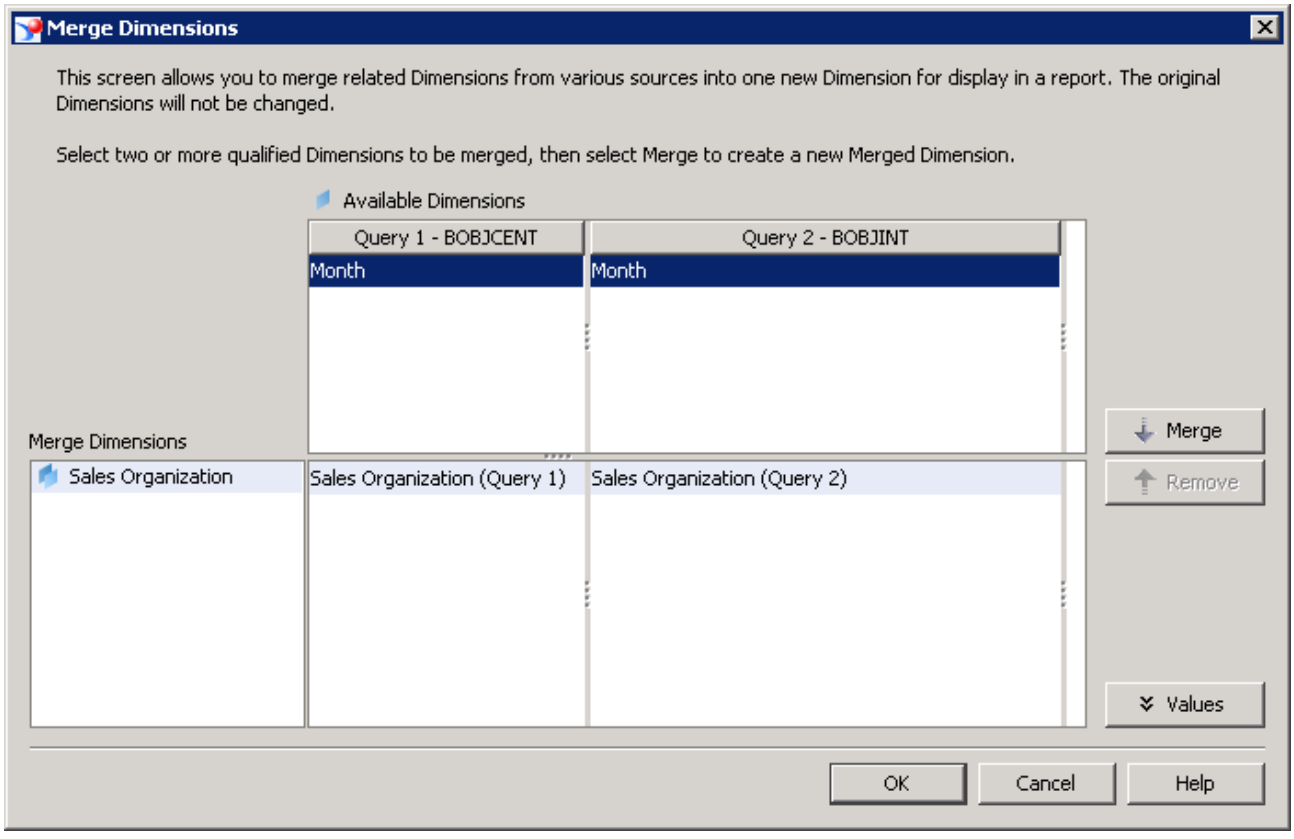
3. Design a Web Intelligence query on OLAP universe for the SAP data.



4. Insert another query on the above query to bring non-SAP data.

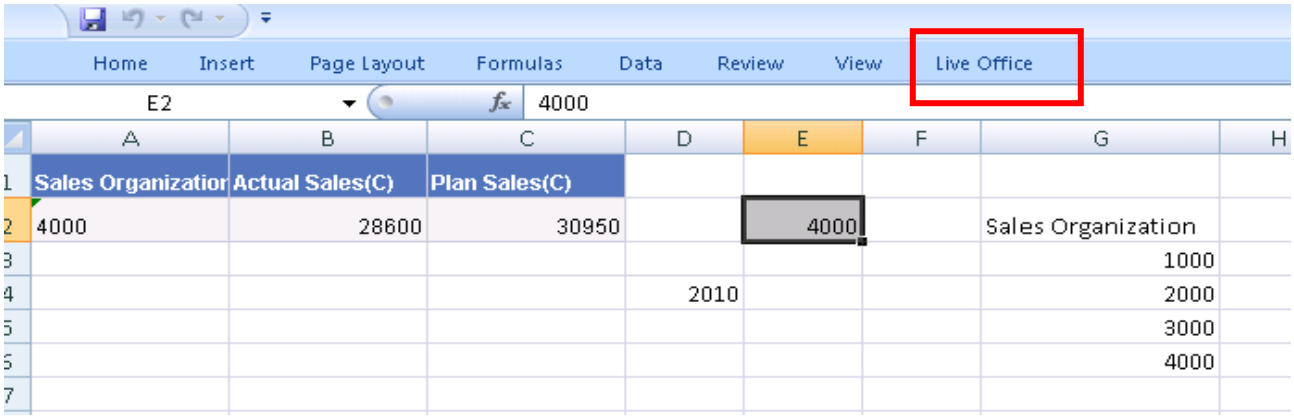


5. Merge the output of two queries into combined by using **Merge Dimensions** functionality.

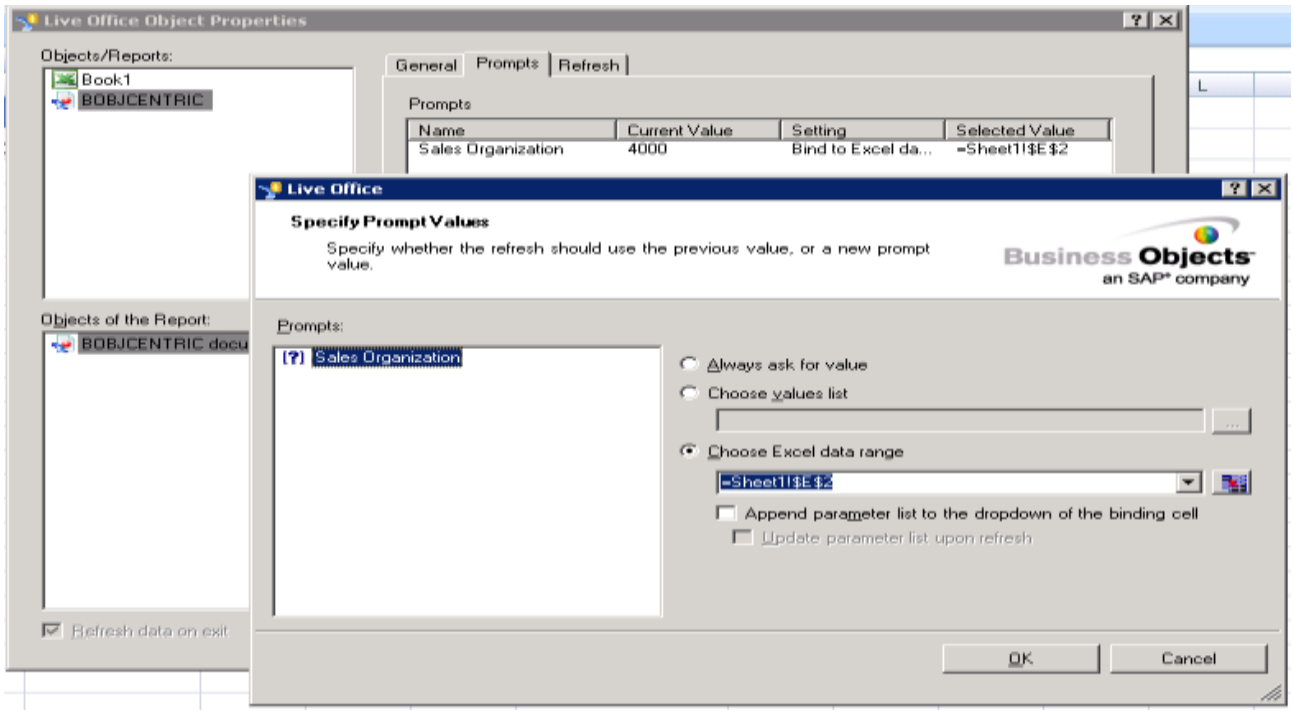


6. Format the combined queries output as per the dashboard requirement.

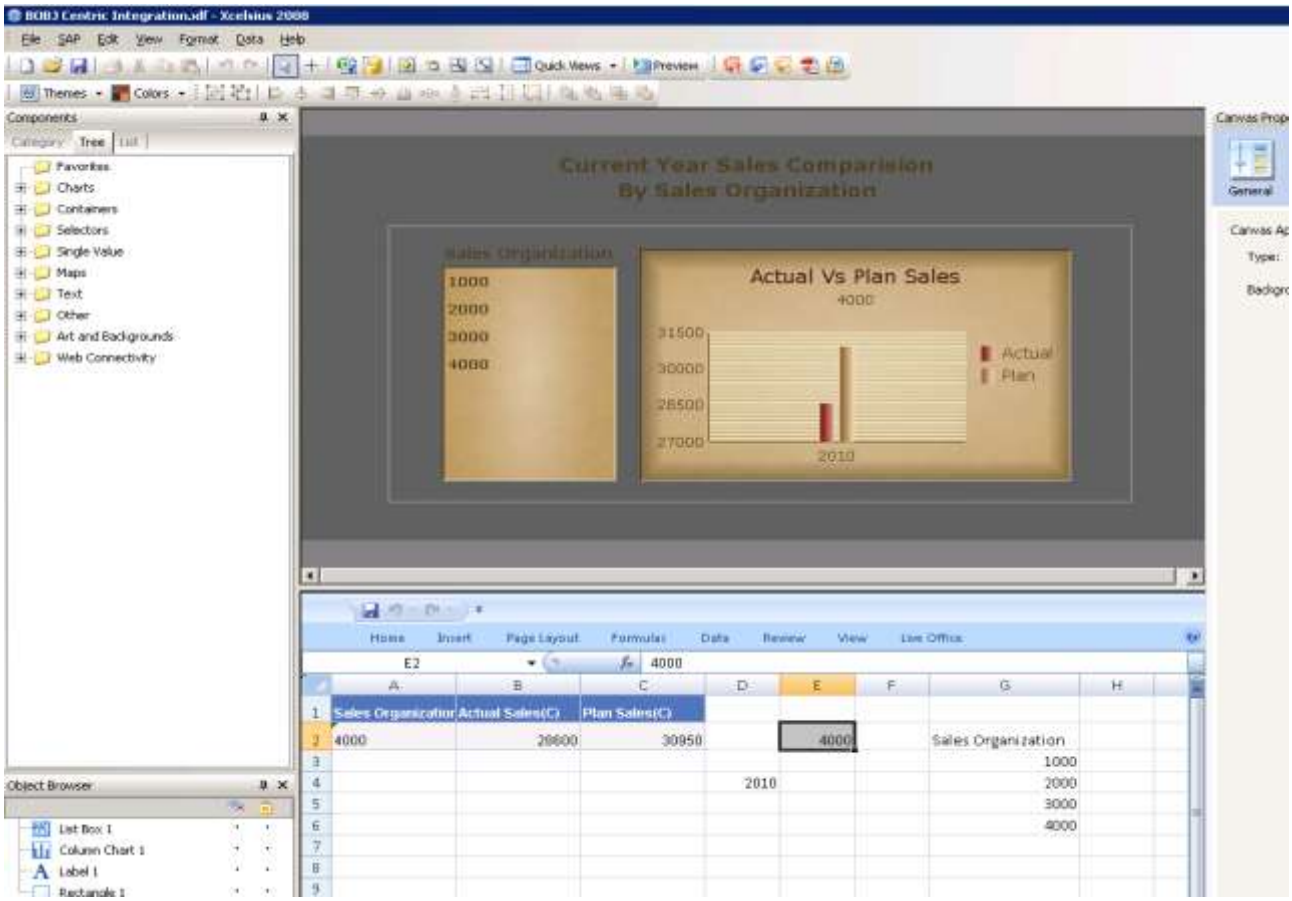
7. a Live Office document to update live data into Xcelsius Dashboard.



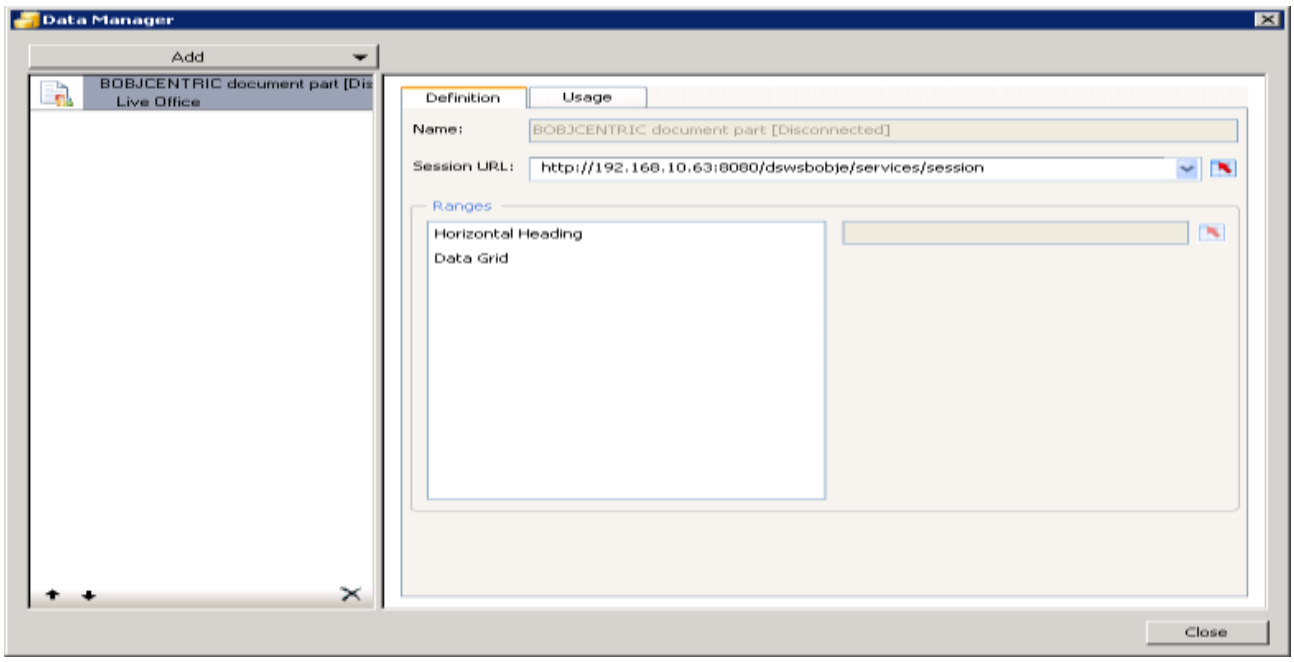
8. Define refresh properties and prompt properties to the Live Office document. Save the document into BusinessObjects Enterprise.



9. Design dashboard using Xcelsius by importing Live Office document from BusinessObjects Enterprise.



10. Maintain Live Office Data Connector to update live data.



11. Save the dashboard and preview.

The above dashboard shows all Sales Organizations or Company Codes (for example, two from SAP BI and other two from a flat file). When selecting a particular Sales Organization through Live Office connector, it brings the data from the respective systems directly.

Related Content

http://www.sdn.sap.com/irj/sdn

http://www.sdn.sap.com/irj/boc

http://www.sdn.sap.com/irj/boc/xcelsius

For more information, visit SAP BusinessObjects.

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.