SQVI – Data Validation Tool - Quickviewer on BI

Applies to:

SAP BW 3.X and BI NetWeaver 2004s

Summary

The objective of this article is to explain the importance and usage of Quick Viewer in BI to compare large amount of data between ODS's, Master data tables and other RDBMS tables. We often do comparison between database tables to find the difference in each to trouble shoot the errors also we compare various custom tables which are maintained for look up and if data is not available for lookup we can use this tool to compare how many records is having a problem. For Example we generally join two ODS's to compare the matching and not matching records to see any mismatches. This paper describes on how to compare the database tables within SAP BI and also R/3 systems using QuickViewer without using other external tools like excel to compare. We have a ready made tool within BW and R/3 to perform this activity.

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Scenario

For an example, we need to validate whether we have captured all sales order header and item records correctly, we would need to validate both the Header ODS and Item ODS which we generally do by downloading the data to excel or other tools and compare each other to find the discrepancies. With this tool, you can easily compare both the ODS's and come to a conclusion which all documents are missing either in header or item level ODS.

This tool can be used to compare only when you have a common key or column between tables.

Creating a QuickView

Call the Quickviewer using transaction SQVI.

QuickViewer: Initial Screen

Enter the name of the QuickView. QuickView names can contain a maximum of 14 characters.

Choose *Create.*

QuickViewer: Initial Screen

Enter a title and comment for the QuickView, if you think they are relevant.

The first step in creating a QuickView is selecting its data source. You can choose one of the following:

- **Table**

- **Table join**
  Multiple tables can be linked together to form a join. The result set is a table, each of the lines of which contains all the fields of all the tables used in the join.

- **Logical database**
  Logical databases are pre-defined paths for accessing database tables. These paths can be made available to various reports in code form. Logical databases are especially useful if the structure of the data you want to read corresponds to a hierarchical view.

- **InfoSet**
  InfoSets are used in SAP Query. InfoSets can be based, among others, on logical databases. Since the number of fields in a logical database can be extremely large, you can also hide fields. In addition, you can define help fields that users can edit like database fields.
  If you choose an InfoSet as your data source, the InfoSet must come from the standard query area. InfoSets from the global query area may not be used when creating a QuickView.
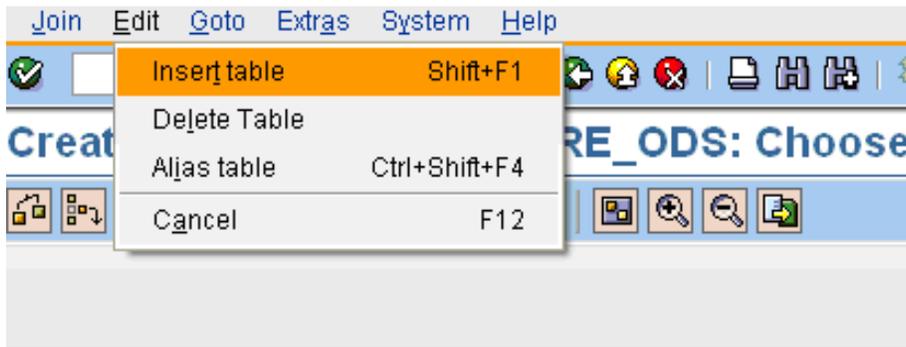
I will be using Table Join option to compare data between ODS's.

Choose Basis mode if you want to create the list directly with no list design.


To insert the tables for comparison, go to Menu EDIT – Insert Table

Give the technical name of the table. In this case I am giving the technical name of the ODS active data table.
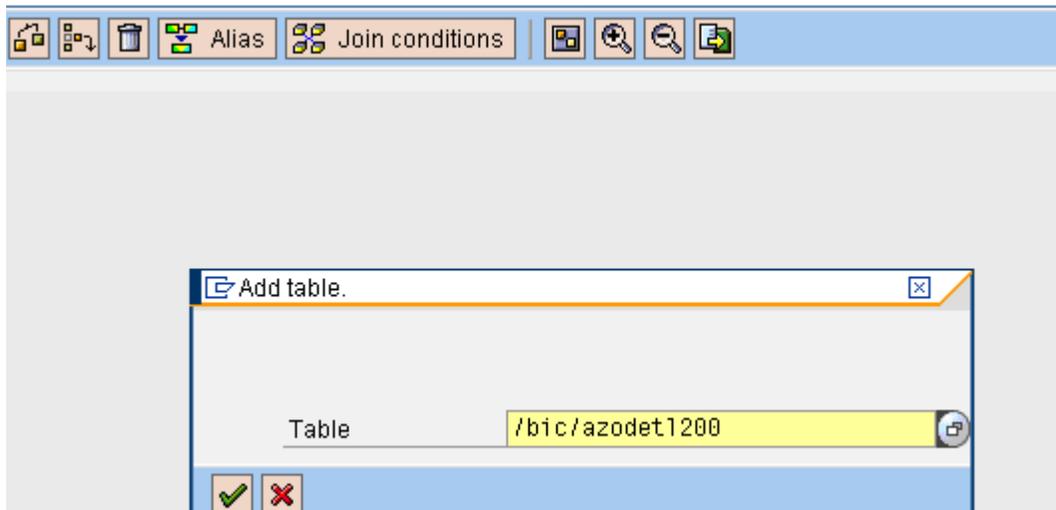
Similarly add other table for comparison. The system will automatically join the relevant fields whose technical names and characteristics are same. You can also customize the join as required.

In this case I am joining Sales document and Source system as my join criteria.
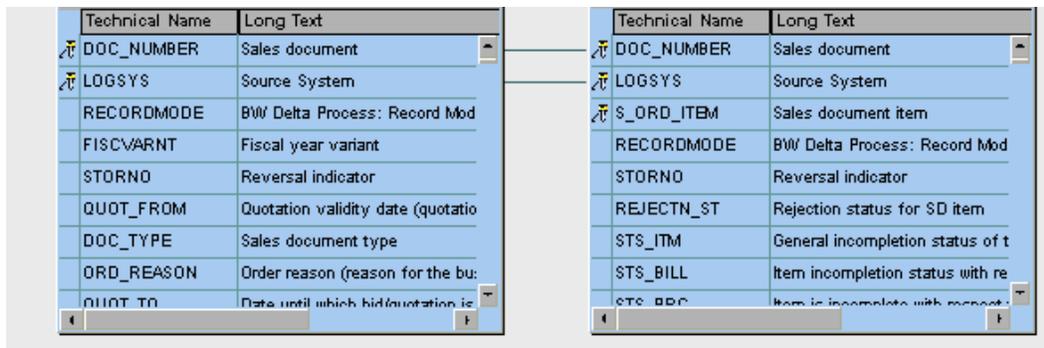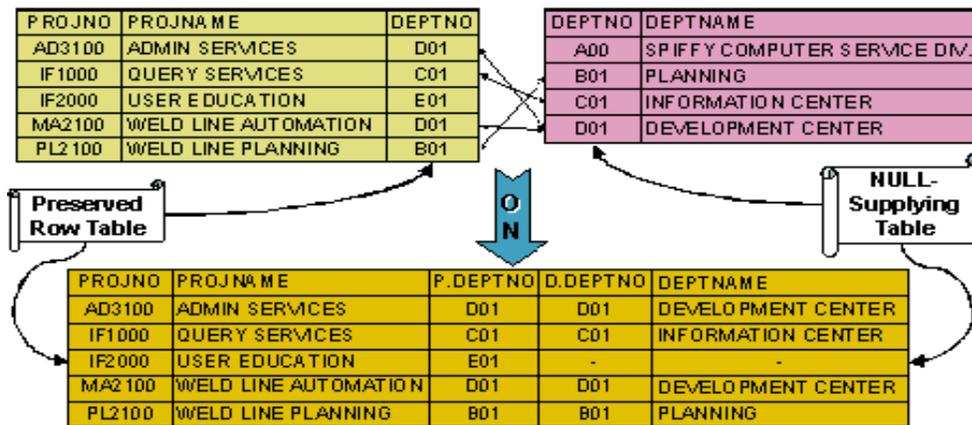

The above is a simple join which displays all the data that are common in both. But I need to search all those matching records and unmatched records. For which I will be using a 'LEFT OUTER JOIN'.

LEFT OUTER JOIN

A LEFT OUTER JOIN is one of the JOIN operations that allow you to specify a join clause. It preserves the unmatched rows from the first (left) table, joining them with a NULL row in the shape of the second (right) table.
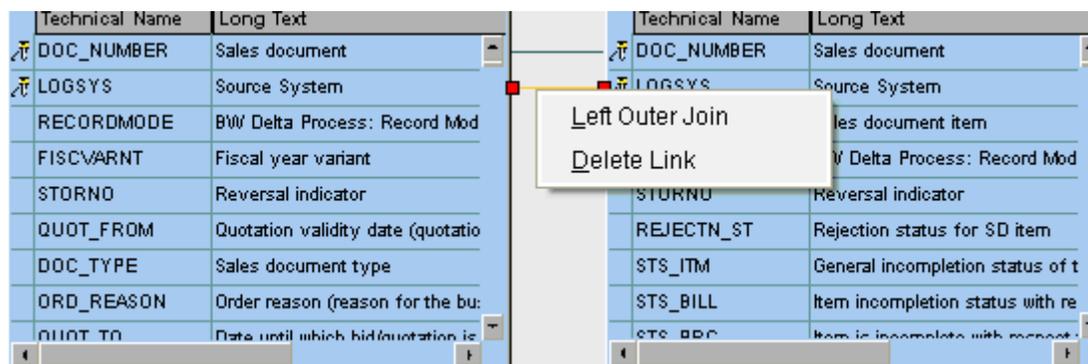
In a Nutshell:

The result of a *left outer join* for table A and B always contains all records of the "left" table (A), even if the join-condition does not find any matching record in the "right" table (B). All the unmatched records of table 'A' will be matched to a 'Null' in table 'B'.

PROJNO	PROJNAME	DEPTNO
AD3100	ADMIN SERVICES	D01
IF1000	QUERY SERVICES	C01
IF2000	USER EDUCATION	E01
MA2100	WELD LINE AUTOMATION	D01
PL2100	WELD LINE PLANNING	B01

DEPTNO	DEPTNAME
A00	SPIFFY COMPUTER SERVICE DIV.
B01	PLANNING
C01	INFORMATION CENTER
D01	DEVELOPMENT CENTER

Preserved Row Table

ON

NULL-Supplying Table

PROJNO	PROJNAME	P.DEPTNO	D.DEPTNO	DEPTNAME
AD3100	ADMIN SERVICES	D01	D01	DEVELOPMENT CENTER
IF1000	QUERY SERVICES	C01	C01	INFORMATION CENTER
IF2000	USER EDUCATION	E01	-	-
MA2100	WELD LINE AUTOMATION	D01	D01	DEVELOPMENT CENTER
PL2100	WELD LINE PLANNING	B01	B01	PLANNING

In the above example DEPTNO column is the common key between the two tables. Now we could see DEPTNO 'E01' is not part of the second table, which is displayed in the result table with a null, here indicated by '-'.

So by filtering on D.DEPTNO to null in result table we could get all the records that are not present in second table.

To use Left outer join, Right click the join and you will get the below option to select the Left Outer Join.

|	Technical Name	Long Text			Technical Name	Long Text	
	DOC_NUMBER	Sales document			DOC_NUMBER	Sales document	
	LOGSYS	Source System			LOGSYS	Source System	
	RECORDMODE	BW Delta Process: Record Mod		Left Outer Join		les document item	
	FISCVARNT	Fiscal year variant		Delete Link		V Delta Process: Record Mod	
	STORNO	Reversal indicator		STORNO	Reversal indicator	
	QUOT_FROM	Quotation validity date (quotatio		REJECTN_ST	Rejection status for SD item	
	DOC_TYPE	Sales document type		STS_ITM	General incompletion status of t	
	ORD_REASON	Order reason (reason for the bu:		STS_BILL	Item incompletion status with re	
	QUOT_TO	Date until which bid/quotation is		STS_BBC	Item is incomplete with respect	

In the left panel, we could see the two tables being displayed with the following options.

- List Fields – Checking the fields in list fields enables us to display those fields in the final output.

- Selection Fields – Checking the fields in selection fields helps us to customize our selection screens before your report is executed.

Once the list fields and selection fields are defined for the tables, SAVE and Check the query.

After Saving, Hit the Back button.
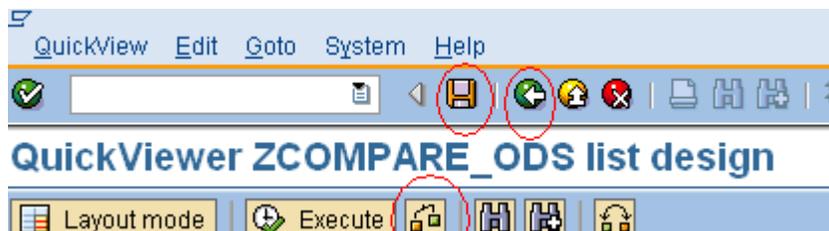
We now see our query "ZCOMPARE_ODS" created.

Note: All quick views are user specific and can be seen only by the same user who has created the quick view.

Executing QuickView

To execute a QuickView , select *Execute* or *Execute with variant*. If you select *Execute with variant*, you see a dialog box where you can enter the variant name.

Once we execute the query, we get the selection screen based on our formatting. Also you can execute this report in both foreground and background.

Output:

The left out join output will display both the matched and unmatched records. But as of now I am interested in only seeing the unmatched records. Unmatched records are those records that are present in table 'A' and not present in table 'B'. In order to display only the unmatched records I restrict the sales documents of the second ODS to Null in the selection screen as shown below.
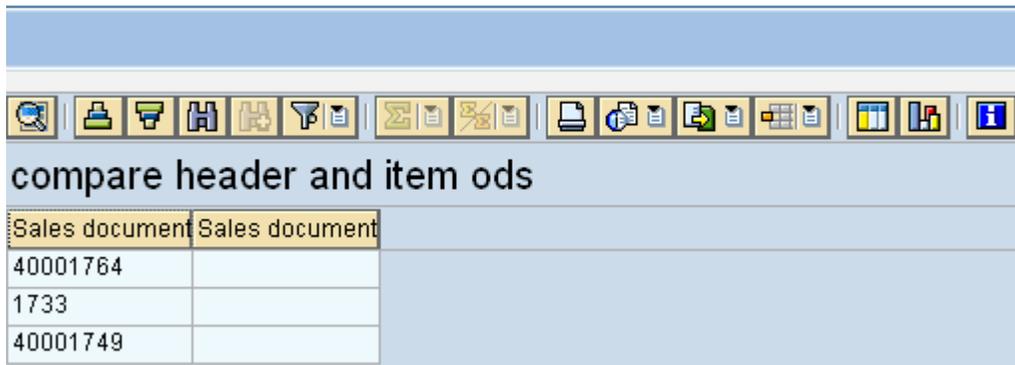
compare header and item ods

The Output explains that the below document numbers are present in left table but not in the right table.

compare header and item ods

compare header and item ods

Sales document	Sales document
40001764	
1733	
40001749	

Restrictions/Limitations:

This tool can be used to compare only when you have a common key or column between tables. And it is recommended to run this report with some selections which fetches considerable amount of data.

Relate Contents

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

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