



# 7 BEST PRACTICES TO BECOME A TABLEAU NINJA FOR OBIEE

Whitepaper

## Abstract

By connecting directly from Tableau to OBIEE, BI Connector has empowered business users with Self-Service capabilities like never before. Read this whitepaper to learn the 7 best practices that will transform you into a highly efficient and effective power user of Tableau with OBIEE

## Introduction

Gone are the days when business users had to spend days, weeks, and sometimes even months to visualize Oracle BI(OBIEE) data using Tableau. Until recently, users had to go through the laborious process of exporting data from OBIEE into Excel, wrangling it into a meaningful format, and uploading into Tableau for analysis. Alternatively, IT teams had to spend weeks or months to write SQL scripts to make OBIEE data accessible in Tableau. By the time OBIEE data is accessible in Tableau, it was already stale and outdated.

But BI Connector changed it all. By providing direct, live connection from Tableau to OBIEE, it has eliminated the inefficiencies and delay endured by business users over the past several years. Business users are now empowered with a simple, time-saving, and compelling user experience for visualizing OBIEE data. At the same time IT departments are preserving years and millions of dollars invested in OBIEE because BI Connector reuses OBIEE data model and security model for Tableau connectivity. As a result, both business users and IT have gained a win-win value proposition.

Using BI Connector, business users access OBIEE data just like accessing data in a spreadsheet or SQL database using Tableau. But users need to recognize that the business critical data in OBIEE, its data model, and the volume of data is not quite the same as department data in a small data mart or spreadsheet. Therefore, users need to follow a few critical best practices when using Tableau to create visualizations or dashboards of OBIEE data.

Read the seven best practices below to maximize your benefit from analyzing and mashing up OBIEE data using Tableau.

## The 7 Best Practices to Become a Tableau-OBIEE Ninja

It typically takes years of learning and practice to become a Ninja, but fortunately you can become a fairly good Tableau-OBIEE Ninja by learning and following these 7 best practices. Let us look at them now.

### 1. Follow KISS Principle

Datasources such as Excel or SQL databases have simple data models. OBIEE data models, on the other hand, are complex. They are built by joining 100s of tables with complex business logic. Each subject area in OBIEE could consist of several fact tables and tens of dimension tables.

BI Connector makes it easy to discover the subject areas, tables, and columns, but when it comes to building your first few visualizations, follow the KISS principle. Start with a small model consisting of one fact table and two or three dimension tables for the first few Tableau worksheets that you create. It is a good practice to choose Time as one of the dimensions so that you can filter the data using date.

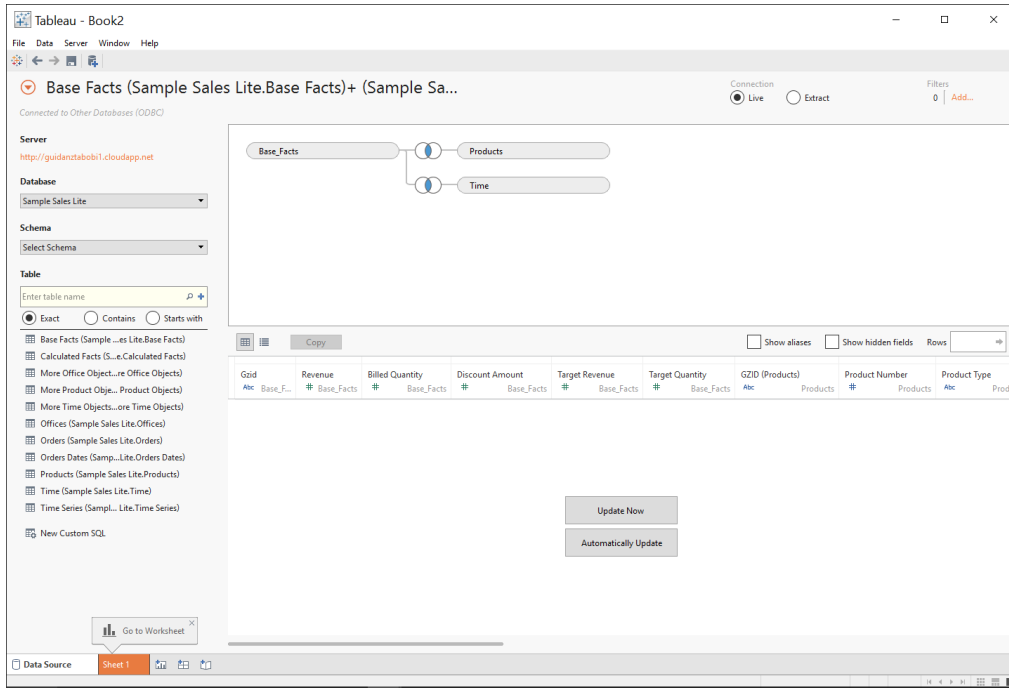


Figure 1: Follow KISS Principle

Once you gain experience building worksheets with the small data models, you can easily graduate to complex worksheets.

## 2. Know Your OBIEE

The most common challenge among users is that they are not familiar with their OBIEE data model and hence do not know which subject Areas, tables, or columns are needed for their report.

In the past, IT department would have built the reports and so business users did not have an opportunity to become familiar with the data model. But now, with BI Connector providing direct access to OBIEE data model, business users need not wait weeks or months for the IT department to develop these reports. All they need to do is to spend some time becoming familiar with their OBIEE data model and creating reports will become a breeze.

Follow the proven approach below to get upto speed on OBIEE data model:

- Keep your Tableau window and OBIEE Analysis in a browser window side by side for the first several reports.
- Identify the OBIEE report that gives you the information that you need to bring into Tableau.
- Drill into the existing report in OBIEE to identify and note down the subject area, folders(tables), and columns that are needed for your Tableau report.
- From Tableau, use BI Connector to connect to the same OBIEE environment. Do not mix production, test, dev environments since you will not be able to verify the results.

- Create visualization in Tableau using the subject area, tables, and columns that you identified from OBIEE.
- Verify that the results you get in Tableau correlate with the results in OBIEE.
- Use this approach until you become familiar with where your data resides in the OBIEE data model.

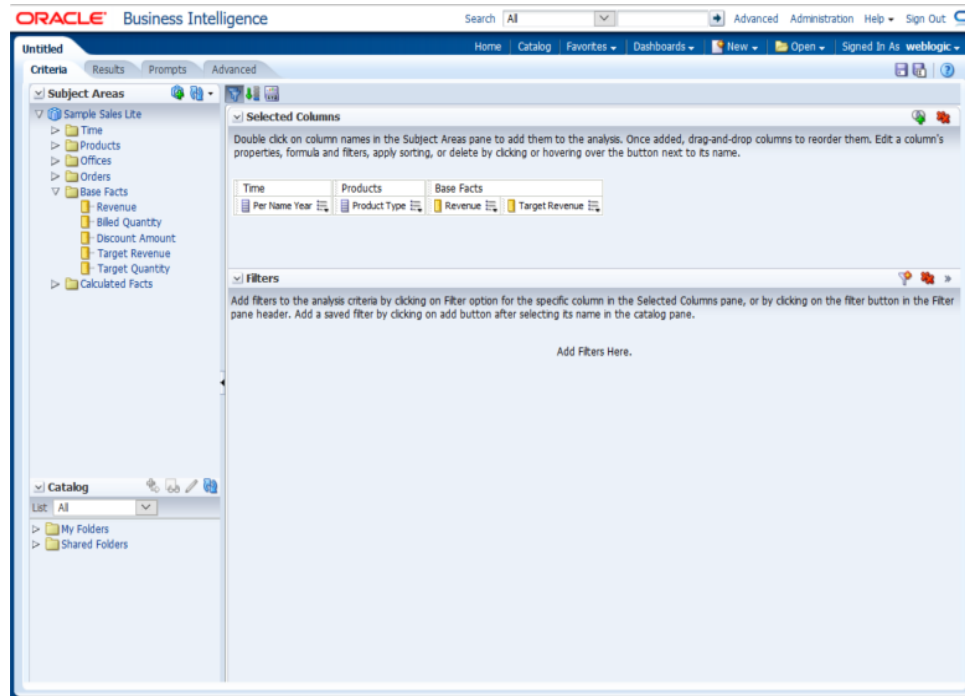


Figure 2: Know your OBIEE

### 3. Stay within Star Schema

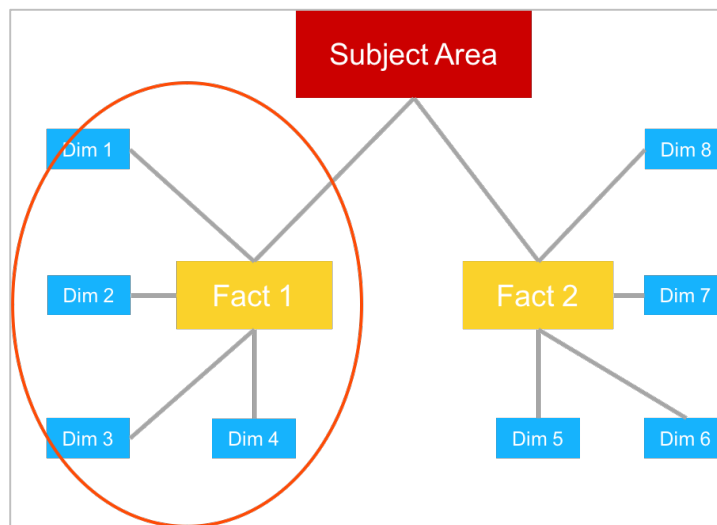


Figure 3: Stay within Star Schema

An OBIEE subject area can consist of more than one star schema. A star schema is collection of fact tables and related dimensions. OBIEE does not like queries with joins across tables from multiple star schemas. Selecting tables from multiple star schemas could result in errors in OBIEE layer. Therefore, when you choose tables from a subject area to create a worksheet or extract data, choose fact tables and dimension tables from a single star schema.

There are a couple of ways to check in OBIEE if the tables that you are choosing belong to the same star schema. One way is to check if there is an existing functioning OBIEE report that uses the same tables. Alternatively, you can create a report in OBIEE with the tables and columns and verify if it queries data (results) without any errors. After verification, you can go ahead and create the report in Tableau using the same tables.

#### 4. Don't Click That Update Now!

Tableau users are used to clicking the “Update Now” button in the data area to get a quick glance of the data. This approach works if you are dealing with small data set from Excel or SQL table. But this approach is not suitable for OBIEE.

The volume of data in OBIEE table is typically millions of rows. When you do a “Update Now”, Tableau sends a “Select \* from <OBIEE Tables>” query to OBIEE. You are essentially fetching millions of rows of data for all the columns from the selected tables. You could be easily spending a few minutes or even hours waiting for this query to fetch data from OBIEE.

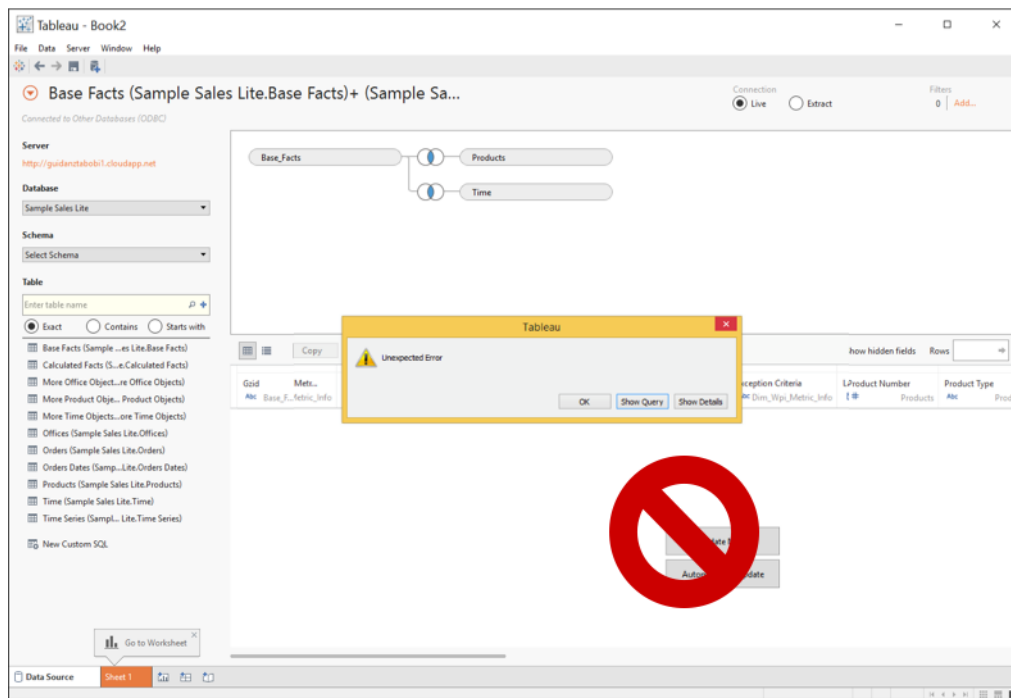


Figure 4: Don't Click the Update Now!

You might also some times see errors (e.g., Unexpected error) that are coming from the OBIEE. These errors could be due to errors in the underlying OBIEE RPD for one or more columns that are not frequently used e.g., logical columns that are not mapped to physical columns. The error could also be due to a join query across tables in two or more star schemas.

To manage query performance and eliminate errors, we recommend that you do not use “Update Now”. If you have to use it, always use filters to limit the data and hide unused (unwanted) columns so that you are not querying all the columns in the tables.

## 5. Uncheck the Auto-Update Worksheet

Did you know that everytime you drag and drop a column from the dimensions panel or measures panel into the worksheet, Tableau sends a query to the underlying data source to fetch the data? This is not a problem if the number of records in the table is not large. But when you are accessing enterprise data ware house through OBIEE, you are dealing with tables containing millions of rows. Sending a separate query for each column is expensive, inefficient, and time consuming.

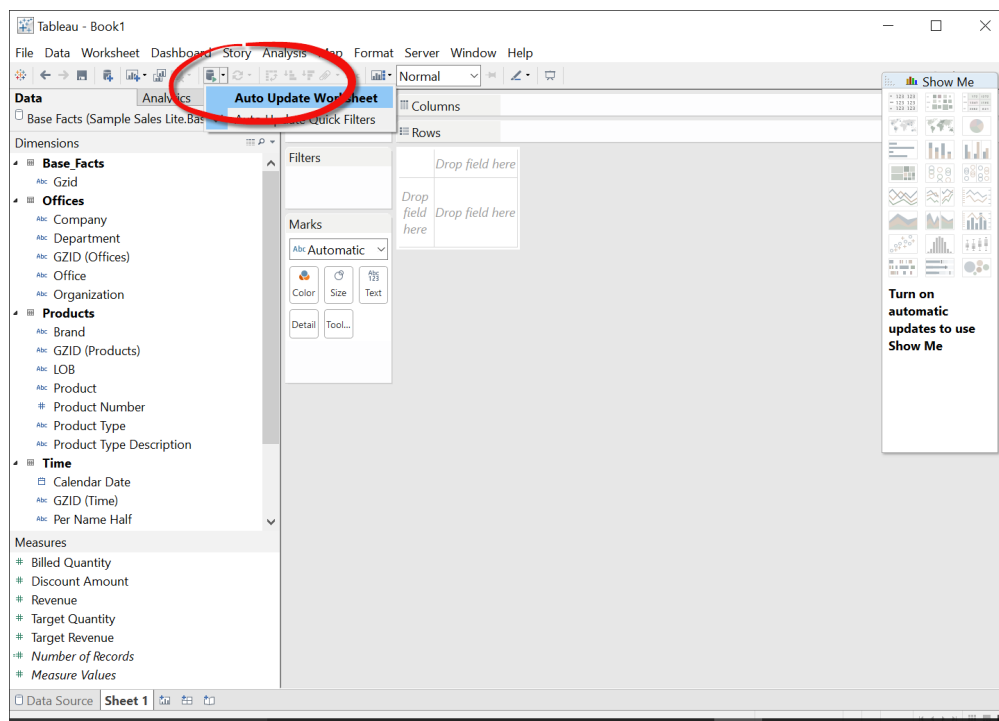


Figure 5: Uncheck the Auto-Update Worksheet

It is therefore a best practice to un-check the Auto-Update Worksheet before you begin to build a worksheet in Tableau. After you drag and drop the required columns, filters, and measures, click on Refresh data to see the results. This will enable you to create reports faster since you are consolidating and sending a single query to OBIEE to fetch the report data instead of separate queries for each column.

## 6. Use Filters

When you work with multiple data sources, it is easy to overlook the fact that you are dealing with tremendous volume of data when the data source is OBIEE. While OBIEE is designed to handle such large volumes, your Tableau Desktop or even Server might not have the resources to bring all the data into its memory. So, it is critical that you effectively manage the data that is queried into Tableau environment. The best way to manage the volume of data is to use Filters in Tableau to fetch only the data that you need for your report or analysis. Using filters is a simple and effective way to accelerate your queries and shorten the time to create reports.

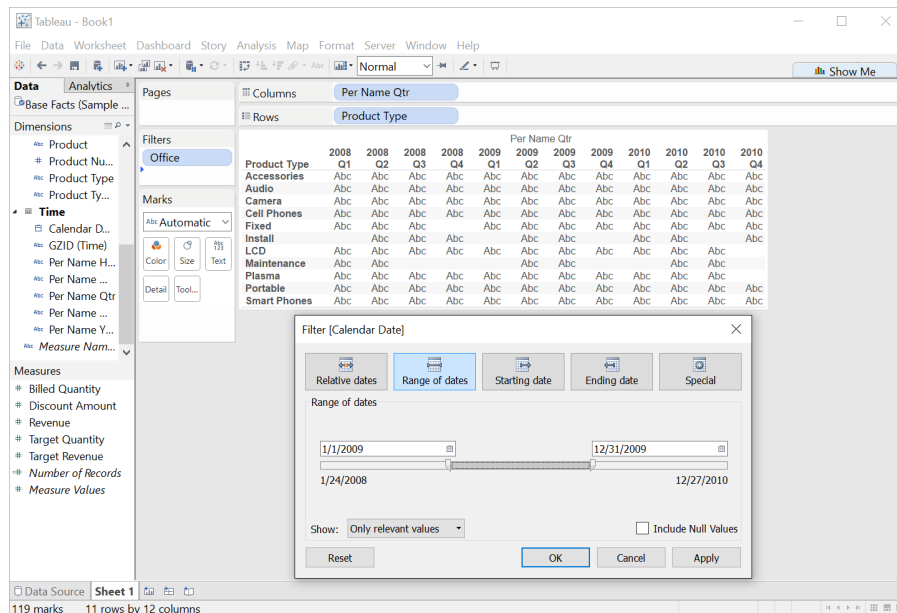


Figure 6: Use Filters

## 7. First Worksheet, Then Extract

One of the common uses of BI Connector is to extract OBIEE data into Tableau data extracts. BI Connector eliminates the need for complex SQL/ETL scripts to extract data into Tableau environments. In just a few clicks you can extract OBIEE data into Tableau, but you eliminate errors and be more effective if you follow these simple recommendations.

- Before you extract data, use the Tableau Worksheet to first visualize the data that you need to extract. Visualization verifies that the data is correct and is indeed what you need to be extracted.
- Extract only the required columns. OBIEE tables often have hundreds of columns many of which you might not need. Hide the columns that you don't need. Use Hide Unused Columns feature in Extract Data UI to minimize the extracted data and also to avoid hitting OBIEE RPD errors in less frequently used columns.

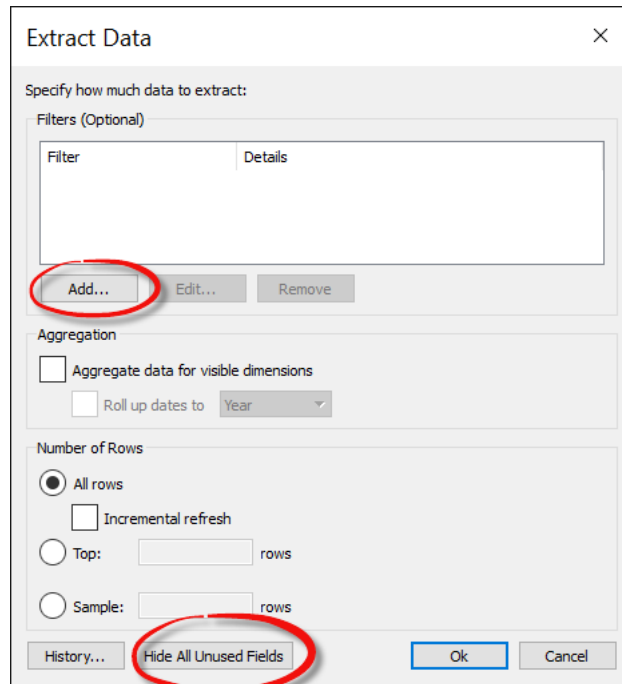


Figure 7: Extract Data UI

- c. Apply filters to extract only the required data and to minimize the performance impact on OBIEE.

## Conclusion

The 7 best practices have been carefully developed based on the superior results experienced by users who followed these techniques. By diligently following these simple best practices when you use BI Connector to connect from Tableau to OBIEE, you can minimize performance issues, OBIEE RPD errors and become an effective and efficient Tableau Ninja for OBIEE within a short period of time.

## Recommended Next Steps

1. Try out the 7 best practices when you use Tableau and BI Connector to visualize OBIEE data. Check how many you have mastered.
2. If you haven't tried BI Connector yet, [download a free trial](#) and try out the 7 best practices.

## Resources to learn more:

1. [BI Connector Website](#)
2. [BI Connector – How it works](#)
3. [14 Day Free Trial of BI Connector](#)
4. [Read the BI Connector blog](#) for the latest update on BI Connector
5. [Contact us](#) with your questions and feedback.