Self-Help Guide

Unify Tableau Connector (Unify BI)

The Unify Tableau Connector (Unify BI) is a web data connector that allows Tableau users to create a query to UM Analytics subject areas and return the data to Tableau that can be used to create reports and visualizations. To use Unify Tableau Connector, it is necessary to have Authoring access to one or more UM Analytics subject areas.

Unify Tableau Connector

About Unify Tableau Connector

Understand Unify Tableau Connector

Body
Unify BI is a simple plugin that allows Tableau users to tap into UM Analytics (OBIEE) as a data source. You can build a UM Analytics query and export the result set into Tableau for further reporting.

Some of the key features of Unify BI include:

- Reporting on governed data sources through Tableau
- Using existing UM Analytics reports in Tableau
- Performing joins in Tableau between two UM Analytics data sources

More information can be found on the [Unify BI Tableau Connector technology page](#).

**Get Access to Unify Tableau Connector**

Body

**NOTE:** The Unify Tableau Connector is in a soft launch phase at this time. If you are interested in being an early adopter, please email edaops@umn.edu to request access to the Unify Tableau Connector.

An overview can be found on the [IT@UMN Technology page](#).

To use the Unify Tableau Connector, you need to have authoring access to one (or more) of the subject areas in UM Analytics. [Check assigned access roles](#) in UM Analytics.
Information about requesting author access to subject areas in UM Analytics can be found on the [UM Analytics technology page](#).

**Configure Unify Tableau Connector**

**Create a Data Connection to UM Analytics**

**Body**

1. Start Tableau Desktop.
2. Select **Web Data Connector** in the **Connect - To a Server** category. 
   
   "The Web Data Connector window is displayed"
3. Enter the URL for the Unify Tableau Connector in the address bar at the top of the Web Data Connector window.
   a. Note: the Unify Tableau Connector is only available to a pilot group of users at this time. If you are part of the pilot, please email OIT Enterprise Data Analytics (edaops@umn.edu) and request the URL for the Unify Tableau Connector.

   ![Web Data Connector Screen](image)

   b. If you've previously used Unify BI, it will be listed in the Recent Connectors area

   ![Recent Connectors](image)

4. Press enter on the keyboard. *The authentication window is displayed.*
5. 
Enter your University of Minnesota Internet ID and Password into the fields.

6. Click Sign In. The Unify BI Workspace is displayed.

   - **Note:** If your account uses DUO, you will need to authenticate at this point. In addition, each time Tableau needs to connect with UM Analytics, a DUO prompt will be sent. Keep your DUO device handy, and check for prompts if the Tableau screen is not loading.

**Select a Subject Area**

Body

1. Click the subject Area dropdown list in the top left. *All subject areas that you have authoring access to are displayed.*
2. Select a subject area. The folders of dimensions and measures for the subject area are displayed in the left sidebar.

Select Dimensions and Measures for the analysis

Body

1. Click the > icon to expand a folder.
2. Double-click or drag-and-drop dimensions and measures to add them to the workspace (the Drop Columns Here area).
   1. In the image below, the Date folder is collapsed and the HR Dept Hierarchy folder is expanded.

3. Click the X icon to remove a column from the workspace.
Create Filters

Body

1. Click the filter tab at the top of the Unify workspace. *The filters panel is displayed.*

2. Click the > icon to expand a folder in the Subject Area pane.

3. Double-click or drag-and-drop a dimension or measure to add to the filter group.

   a. The default filter condition is **Equal/In**, click the drop-down to select a different condition.

   b. Click the drop-down in the empty field to select values for the filter condition.

   c. Click the magnifying glass to the right of the empty field to search for values.

   d. Click the X to remove the filter condition.

   e. Filters within a filter group are **AND** by default. Click the **OR** button in the filter group bar to change it.

Note: If a filter is created on a date dimension, it will be displayed in the filters pane with the format DD/MM/YYYY. When the data is returned to Tableau, the dates can be formatted in any style.
Create Filter Groups

1. Click the + icon in the Filter Group heading to create a new Filter Group.
2. Click the X icon in the Filter Group heading to remove the Filter Group.

Adding columns to Filter Groups

If you have multiple filter groups defined, double-clicking a column will only add the column to the first filter group. If you want to add a column to any other group, you will need to drag the column and drop it on the Filter Group bar.

"Combining and grouping filters with AND and OR Boolean operators enables you to
create complex filters without requiring you to know SQL statements. Grouping enables you to establish the precedence in which Oracle BI EE filters an analysis." (From the Oracle help documents.)

Create Custom Column Formulas

Body

Creating and editing column formulas is the same as in UM Analytics. Creating column formulas is useful if aggregation or calculation is needed in the report. For example, the IFNULL formula is useful when a measure column contains null values; or, COUNT is useful for aggregating values of a column.

1. Click the **Columns** tab in the header area of the Unify BI workspace.

2. Locate the column and click the gear icon. *The edit column window is displayed.*

3. Edit the name of the column at the top.
4. Enter the formula in the formulas area.
   a. Click the book icon to open the list of all formulas to see the correct
5. Click the checkmark to finish editing the column.

**Preview the Data**

Body

At any point when selecting, editing, and filtering the columns, the returned data can be previewed.

1. Click the preview data button in the header area of the workspace.

2. The data is displayed in a table.

   a. The data preview is limited to 100 rows in order to verify your data set.
   b. Use the filter at the top to filter the displayed data in the table.
   c. Use the filter in any column to filter the displayed data for only that
column.
i. These filter tools are only for finding data in the table, they do not affect the data that will be returned by the finished query.
d. The columns can be sorted by clicking the column header.

Create Multiple Queries

Body

Multiple queries can be created at the same time. When finished building a query, click **Save Query** in the right hand sidebar. A generic name *Table (1)* will be assigned. Click the **pencil icon** to change the name of the query.

Create another query

Click the New Query button in the top toolbar. The Unify BI workspace is cleared out, and the next query can be constructed.
To return to a previous query, click the query name in the right sidebar.

**Export to Tableau**

**Body**

When satisfied with the query, click the green **Unify** button at the top of the workspace.

Note: The volume of data that can be exported to Tableau is currently limited to 500,000 rows.

The query will execute, and then the data will be available in the Tableau workbook.

* **Reminder:** If your account uses DUO, you may need to authenticate again.
In Tableau, your data will not initially display on the Data Source tab. Click **Update Now** to start interacting with your data.

- **Reminder:** If your account uses DUO, you may need to authenticate again.

**Refresh Tableau Data**

**Refresh the Data Extract**

**Body**

To refresh the data in the Tableau report,

1. Click **Data** in the menubar.
2. Click **Refresh all extracts...**
   ![Refresh All Extracts](image1.png)
3. Click **Refresh**
1. You might need to authenticate with your University Internet ID and Password.

4. The data extract will refresh and a green checkmark will be displayed.

**Edit the Query**

**Body**

The query that is being used by the Unify Tableau Connector can be edited.

To edit the query:
1. Click the **Data Source** tab in the lower left.
   1. Note: If clicking the Data Source tab takes you straight to the Unify login screen, you will need to refresh the extract first.
2. Click the drop-down arrow for the oit-biapp connection.
   a. Click **Edit Connection...**
   
   ![Edit Connection](image)
   
   b. Note: If your account uses Duo, you will need to authenticate first.
3. The Unify BI workspace is displayed.