

# Google Sheets Connector

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## Overview

Using Google Sheets is a productive and simple way for teams to collaborate via spreadsheet data. With a Yellowfin connector, you can connect your Google Sheets data to extend its usefulness using the Yellowfin range of data analytics tools.

While Yellowfin is connected to your Google Sheets data, it automatically updates at regular intervals to keep your source data and your Yellowfin data synchronized. It's visible in Yellowfin as a data source. From the data source, you can create views, then reports, charts, dashboards and more.

To connect Yellowfin to Google Sheets:

1. Install your connector
2. Configure Google
3. Connect your accounts
4. Create content



Note: This connector required a change to the Yellowfin user interface. It is compatible with Yellowfin versions 9 and 8.0.10. Due to a change in Google's authentication methods, the previous connector will not work with any versions of Yellowfin.

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## Install the Google Sheets connector

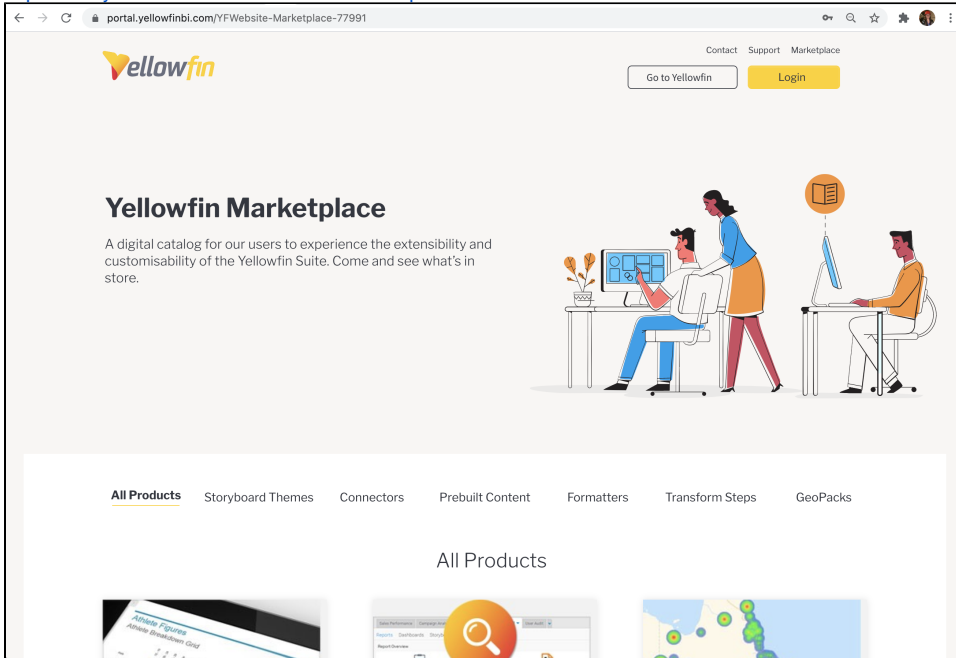
Installing a connector to use with Yellowfin requires access to Yellowfin and to Yellowfin Marketplace. To install a connector:

- download the connector from Yellowfin Marketplace; and,
- upload the connector to Yellowfin.

Each of these steps are described in the sections below.

### Download a connector from Yellowfin Marketplace

1. Go to Yellowfin Marketplace and login:  
<http://www.yellowfinbi.com/YFWebsite-Marketplace-77991>

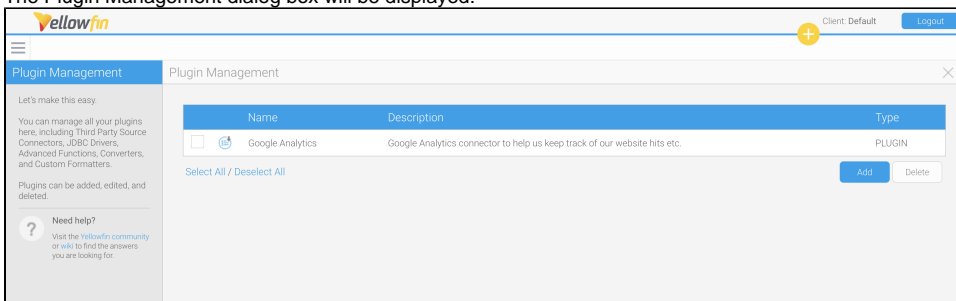


2. Scroll through the list of connectors until you find the free Google Sheets Connector, then click on the **Read More** link to expand its details
3. Click on the **Download** button to download the connector.

## Upload the connector to Yellowfin

When adding a new connector to Yellowfin, ensure that your Yellowfin user has enough access to complete the steps below. Their role will need some of the checkboxes checked under the Data Sources & Views role in the Yellowfin admin console. The steps below presume the user is logged in to Yellowfin with the correct access level.

1. From the Yellowfin burger menu in the top left corner, click on **Administration**, then **Plugin Management**. The Plugin Management dialog box will be displayed:




If you have already installed any other plugins or connectors, they will be listed here

2. Click on the **Add** button to display the New Plugin dialog box

New Plugin

Name

Description



Drag a Plugin file here (.jar/.yfp)

Cancel

3. Enter a name and a description, which will be used to list the connector on the Plugin Management page, then upload the connector that you downloaded from Yellowfin Marketplace

Yellowfin will process the connector and display its contents:

New Plugin

Google Sheets Connector v4

Connect to Google Sheets

scribe-1.3.7.jar

gdata-appsforyourdomain-1.0.jar

google-api-services-sheets-v4-rev108-1.0.jar

gdata-photos-1.0.jar

gdata-client-1.0.jar

gdata-base-1.0.jar

google-api-services-sheets-v4-rev108-1.0.jar

Submit

4. Click on the **Submit** button to add the connector to your Yellowfin instance

Yellowfin

Client: Default

Logout

Plugin Management

Plugin Management

Let's make this easy.

You can manage all your plugins here, including Third Party Source Connectors, JDBC Drivers, Advanced Functions, Converters, and Custom Formatters.

Plugins can be added, edited, and deleted.

Need help?

Visit the [Yellowfin community](#) or [wiki](#) to find the answers you are looking for.

	Name	Description	Type
<input type="checkbox"/>	Google Analytics	Google Analytics connector to help us keep track of our website hits etc.	PLUGIN
<input type="checkbox"/>	Google Sheets Connector v4	Connect to Google Sheets	PLUGIN

Select All / Deselect All

AddDelete

Now that you've installed the Google Sheets connector, you're ready to configure your Google credentials to securely connect with Yellowfin.

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## Configure Google

Yellowfin can only display Google Sheets data via the connector after some strict security checks are made. You will therefore need a Google client ID that has the Google Sheets API enabled. The process is covered in the steps below. Once complete, you will use these credentials to set up a new data source in Yellowfin via the connector.

### Create Google Client ID

The instructions below are not related to Yellowfin software. They are provided here only to cover the basics of the configuration you'll need to use Google Sheets in Yellowfin. If you need further help, please refer to any instructions provided by the third-party software provider.

1. Go to [console.developers.google.com](https://console.developers.google.com) to open the Google APIs console
2. Click on the **Credentials** link on the left
3. At the top left of the screen, click on **Select a project**, to display a dialog box, then click on **NEW PROJECT** in the top right corner of the dialog box
4. Type a name for the project, such as 'Yellowfin', and optionally, edit the provided project ID, then click on the **Create** button
5. On the **Credentials** page, click on the **+CREATE CREDENTIALS** link at the top of the page, then click on **OAuth client ID**
6. If you're prompted to provide further information on the **OAuth consent** window, click on the **CONFIGURE CONSENT SCREEN** button and provide the requested information, then click on the various buttons, including the final **BACK TO DASHBOARD** button, then repeat step 5
7. From the **Application type** dropdown, select **Desktop app**, and enter any additional information required
8. Click on the **Create** button  
The **OAuth client created** confirmation box will appear, displaying your client ID and your client secret
9. Click on **OK** in the bottom right corner



If you have problems with access, check that under **OAuth consent screen**, your publishing status is set to **In production**.

## Enable Google Sheets API

1. From the Google APIs console, click on the **Library** link on the left, and if you're prompted to enable the API library, enable it
2. In the search bar, type **google sheets api**
3. From the search results, click on **Google Sheets API**
4. Click on the **Enable** button to enable the API

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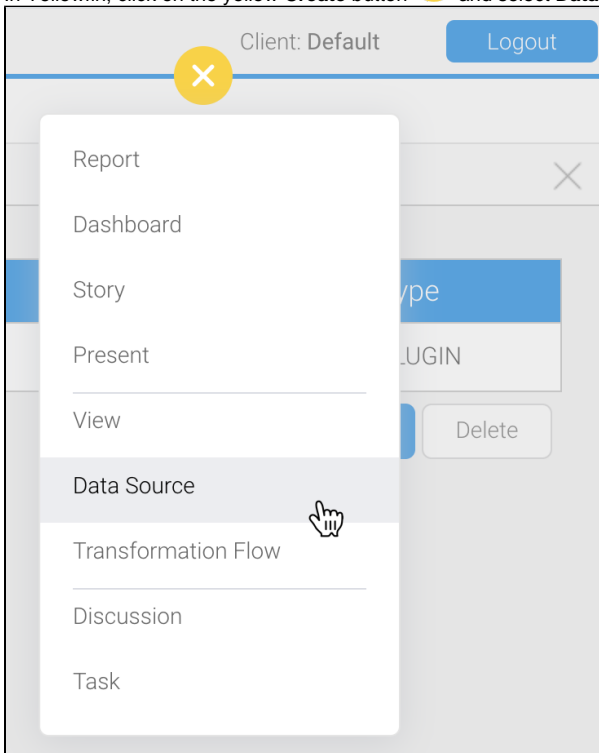
## Connect your accounts

Now that your Google APIs console has been configured and your Google Sheets connector is installed within Yellowfin, you can connect the two. To complete these steps, you will:

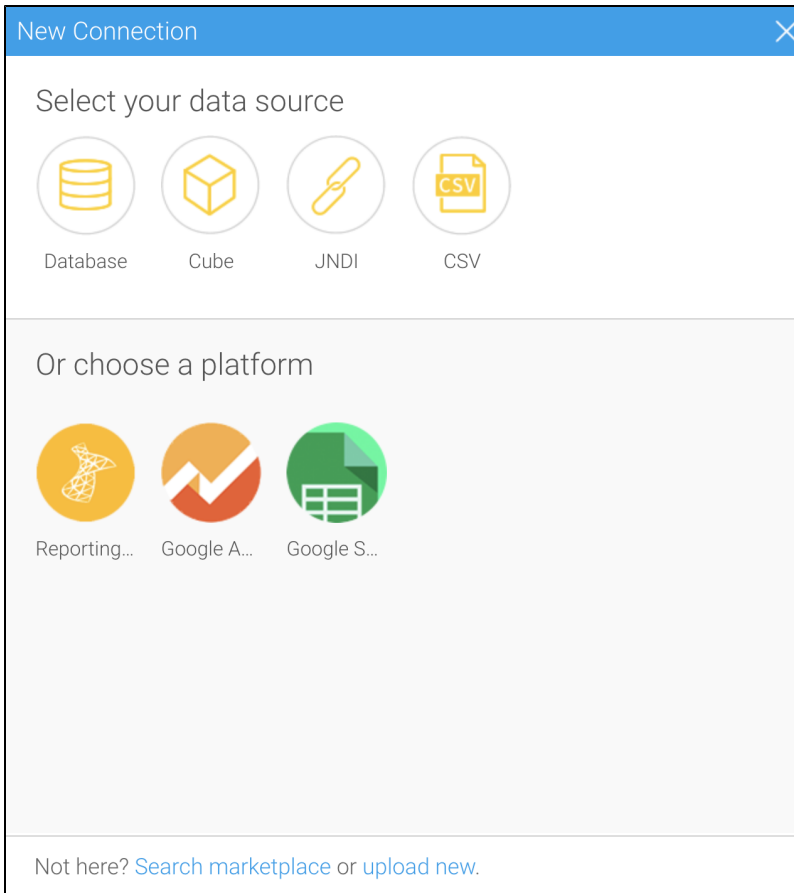
- create a new data source; and,
- create a secure connection between Google and Yellowfin.

## Create a new data source

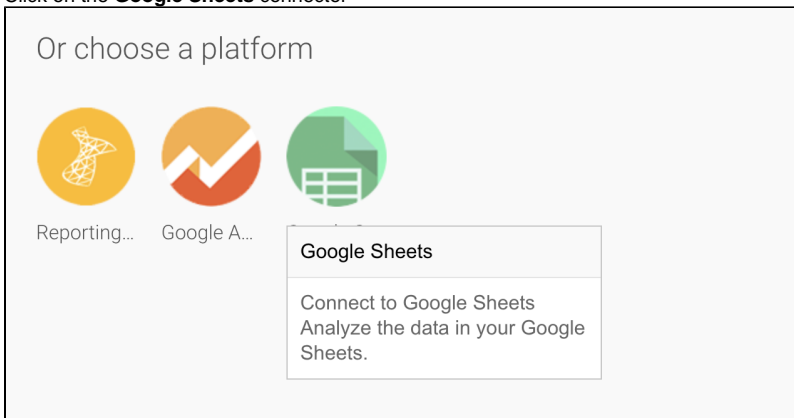
1. In Yellowfin, click on the yellow **Create** button  and select **Data Source** from the list



Now, you will see the Google Sheets connector listed under **Or choose a platform**



2. Click on the **Google Sheets** connector



## Identify your connection

The fields in the New Connection dialog box should be set to match your requirements. The table below describes how they work. The first set of fields relate to authenticating with Google. Once that's complete, you'll need to make some decisions for the following fields.

Field name	Description
Set incorrect data to null	Yes — Any data that's inconsistent with the defined data type will appear as null. No — Yellowfin will display the data.
Number of rows used to define the data type	Set the number of rows for Yellowfin to scan to define the column data type. Yellowfin determines this based on the majority of records (for example, if there are six metrics and four dimensions, Yellowfin would define the data type as a metric). By default, this is set to 10.
Include File(s)	

Select any Google Sheets files that you expect to use within Yellowfin. To create a view from a Google Sheet tab source, it must be selected in this field. This selection can be edited at any time through the Admin Data Sources. If you're upgrading from a previous Google Sheets connector, select any files that it used.

If a Google Sheet is removed from this data source or from the drive that the data source connects to, any reports and views associated with the Google Sheet will stop displaying data entirely. Yellowfin periodically checks for updates to any Google Sheets selected and updates any related data within Yellowfin accordingly.

The maximum number of Google Sheets that can be connected is the quota of request per minute Google assigns to your account by default is 40. This number can be increased by submitting an application to Google. Alternatively, you can create additional connectors, but be aware of the overhead of polling a large number of files.

1. Provide a name and a description for your connector if these fields are empty

**New Connection** [X]

Connection Settings — Create View — Analyze

Name:

Description:

Connection Instructions:

1. Enter your OAuth 2.0 Client ID and Client Secret
2. Click the 'Generate Authorize URL' button.
3. Click the 'Authorize Google Sheets' button, login, and 'Allow' access to your account.
4. Copy the PIN provided and paste it into Yellowfin.
5. Click the 'Validate PIN' button.

Client ID:

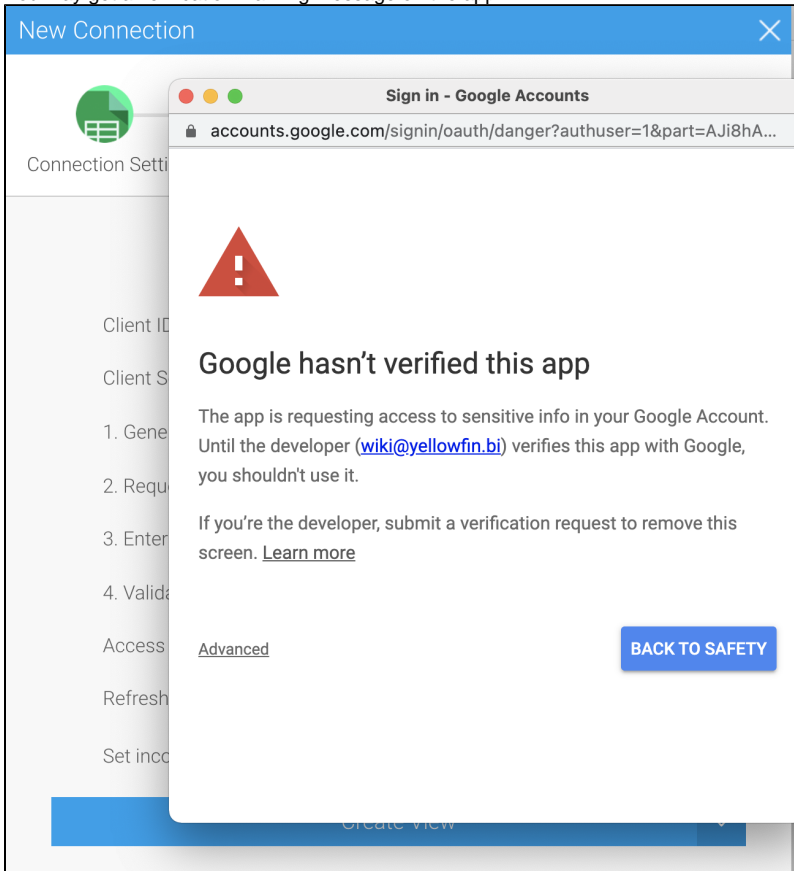
Client Secret:

1. Generate Token Request URL · **Generate Authorize URL**

**Create View** [v]

2. Enter your client ID and client secret from your Google APIs console in the relevant fields
3. Click on the **Generate Authorize URL** button
4. Click on the **Authorize Google Sheets** button
5. Choose your Google account (the one you used to create the Client ID and Client Secret fields)

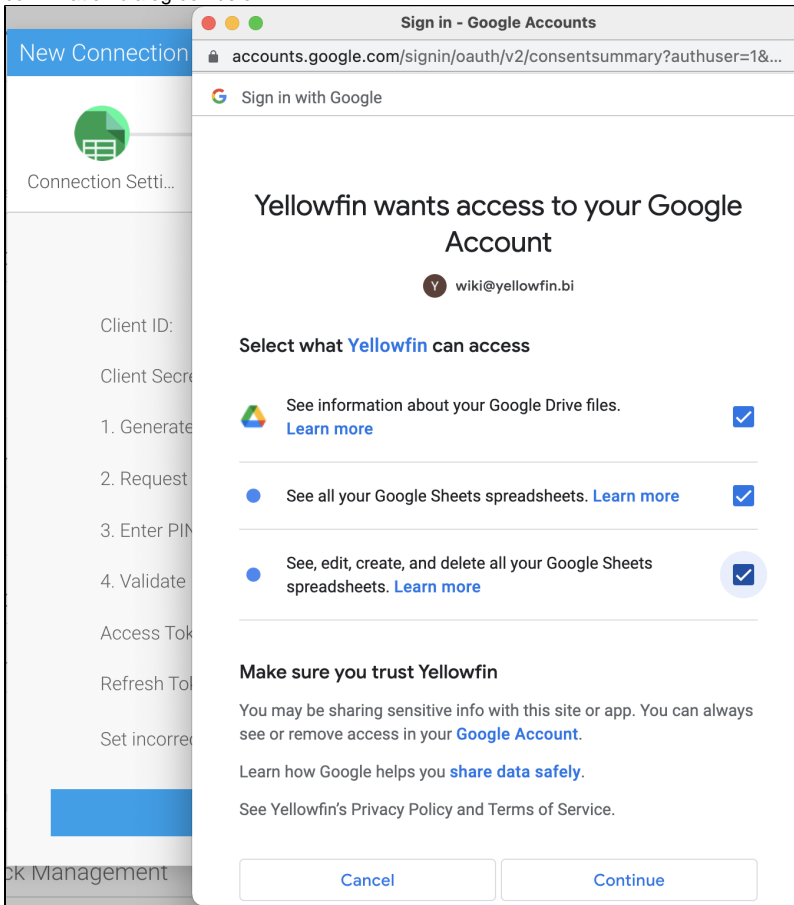
6. You may get a verification warning message on the app.



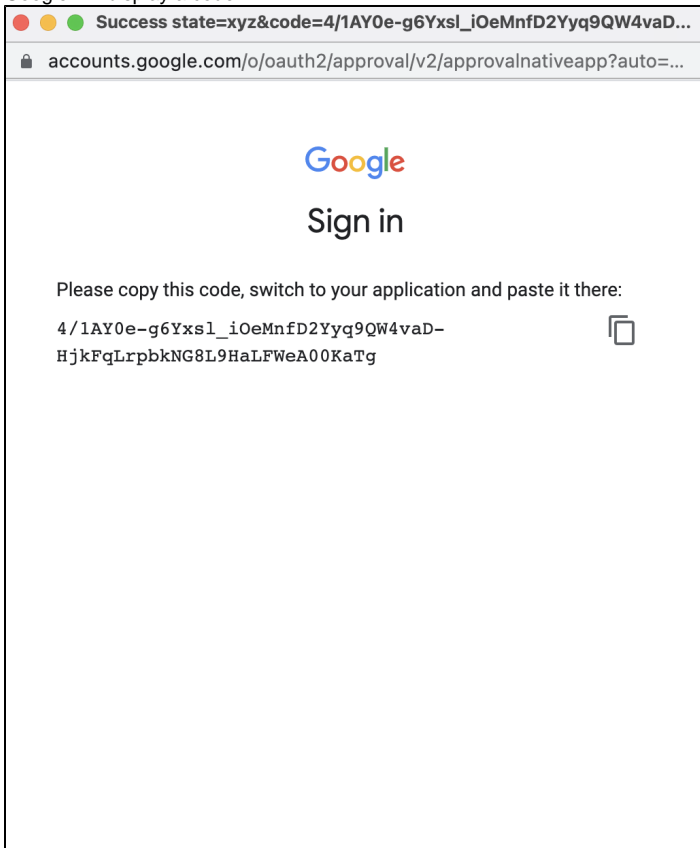
Note: To remove this warning screen, submit your data usage and server host to Google for review



7. If the message above appears, click on the **Advanced** link and any further confirmation links (there may be three or four) to get to the confirmation dialog box below



8. Ensure each checkbox is checked, then click on the **Continue** button (you may need to scroll down)  
Google will display a code



9. If the validation fails, your Yellowfin session may have timed out and you'll need to log in and create this connection again (it's much faster the second time around).
10. Copy the code, then switch back to Yellowfin
11. Paste the code into the **3. Enter PIN** field
12. Click on the **Validate Pin** button

13. Scroll down the dialog box to see the other pre-filled fields

New Connection

Connection Setti...

Create View

Analyze

1. Generate Token Request URL:

Generate Authorize URL

2. Request Access PIN:

Authorize Google Sheets

3. Enter PIN:

4/1AX4XfWjz\_iL4S1Wdvtd4A4XGC

4. Validate Pin:

Validate PIN

Access Token:

.....

Refresh Token:

.....

Set incorrect data to null:

Yes

Number of rows used to define the data type:

10

Include File(s):

List of information and changes to be sha...  
Top 20 Landing pages on Blog (Organic) ...  
Yellowfin - Health Check  
Yellowfin - Post-migration Health Check - ...  
Yellowfin - Post-migration Health Check - ...

Create View

14. Check the default values are consistent with your needs (see the table before these steps for further information), and adjust as required

15. Use your mouse and the Ctrl (PC keyboard) or Command (Mac keyboard) key to select multiple files from the list displayed in the **Include File(s)** field, which displays the list of files available in your Google Drive
- IMPORTANT:** save time later by making sure you select the right files here: if you think you need to use a file, include it in your selection!

New Connection

Connection Setti...

Create View

Analyze

1. Generate Token Request URL:

Generate Authorize URL

2. Request Access PIN:

Authorize Google Sheets

3. Enter PIN:

4/1AX4XfWjz\_iL4S1Wdvtd4A4XGC

4. Validate Pin:

Validate PIN

Access Token:

.....

Refresh Token:

.....

Set incorrect data to null:

Yes

Number of rows used to define the data type:

10

Include File(s):

List of information and changes to be sha...

Top 20 Landing pages on Blog (Organic) ...

Yellowfin - Health Check

Yellowfin - Post-migration Health Check - ...

Yellowfin - Post-migration Health Check - ...

Create View

16. Click on the **Create View** button

Yellowfin will process your selection into a data source and display the next step, where you can create a single-table view

New Connection

Google Sheets v4

Create View

Analyze

Select Table:

Choose the table you want to analyze from your selected data source

View Name

Give your view a great name to help others find it

View Description

Give your view a great description to help others find it

Search

List of information and cha...

Yellowfin - Health Check - 4...

Yellowfin - Health Check - B...

Yellowfin - Health Check - ...

Yellowfin - Health Check - ...

Yellowfin - Health Check - ...

Yellowfin - Health Check - I...


Create Analysis

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## Create content in Yellowfin

Once you've successfully connected Yellowfin to any Google Sheets in your Google account and selected the files to be used as a data source, you're ready to create a view. The spreadsheets you selected in the previous screen will be used to populate a list that contains each tab from each spreadsheet (in the format of 'sheet name – tab name'). A tab effectively works as a table within a view, presuming your content is prepared accordingly.

Due to the nature of third-party connectors, a view created from a third-party connector data source can hold a single table only. In this step, you can

create your first single-table view. If you need additional views from this data source, you can use the yellow **Create** button  to create additional single-tables views. If you wish to use data from more than one Google Sheet tab, you can use a sub query to pull the data into a single report.

Once you've chosen which Google Sheets tab to use as a table in your view and provided the view with a name, Yellowfin will process the view and display the Report Builder.

### Create a View

1. From the **Select Table** dropdown list, click on a Google Sheet tab to use as a view

2. In **View Name**, enter a name for your view, and if you'd like to add a description, enter it into **View Description**

New Connection

Participants

Create View

Analyze

Select Table:  
Choose the table you want to analyze from your selected data source

Search

Kick Off Polo Order - AMER...  
Kick Off Polo Order - APAC...  
Kick Off Polo Order - EMEA...  
Kick Off Polo Order - Japan...  
Participants - Athletes.gs  
sample log - Sheet1.gs  
xmas party list - Sheet1.gs

View Name  
Give your view a great name to help others find it

Participants 2021

View Description  
Give your view a great description to help others find it

Camp participants for winter 2021

Create Analysis

3. Click on the **Create Analysis** button

Yellowfin will process the view and display the Report Builder, where you can build reports, charts and more. See the [wiki page on building reports](#) for more information.

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## Add more sheets later on

In a perfect world, you'll be able to see all the Google sheets you need to access. Alas, a perfect world doesn't consider new data in new Google sheets, or accidentally omitted sheets during the initial setup of a new data source. You can add more Google sheets at any time via the **Data Sources** section of the Admin Console.

1. From the Yellowfin burger menu in the top left corner, click on **Administration**, then **Admin Console** to display the Yellowfin administration options

Yellowfin

Client: Default Logout

Administration

Let's make this easy.  
You can configure and manage your instance from this Admin Console to tailor your Yellowfin experience.  
Remember to save your changes as you configure your environment.  
Need help?  
Visit the Yellowfin community or wiki to find the answers you are looking for.  
License Days Left  
License expires 31 January 2022 210 Days

Users  
Yellowfin Users  
Versus License 25 / 25

Unique Logins  
Last 30 Days  
89

Dashboards  
Accessed last 30 days  
7 / 30

Reports  
Read last 30 days  
22 / 134

Configuration  
Configuration  
Content Settings  
Images and Maps  
Email Template  
Administration  
Session Management  
Schedule Management  
Dashboard Management  
License Management  
Background Execution  
Plugin Management  
System Information

2. Click on the **Data Sources** section at the top to expand it, where you should see your Google Sheets data source

The screenshot shows the Yellowfin dashboard with the 'Data Sources' section expanded. The dashboard includes a top navigation bar with the Yellowfin logo, a user profile, and a 'Logout' button. The main content area is divided into several sections: 'Administration' (with a 'Let's make this easy' message and a 'Need help?' link), 'Users' (showing 'Yellowfin Users' and 'Versus License 25 / 25'), 'Unique Logins' (showing 'Last 30 Days' and '89'), 'Dashboards' (showing 'Accessed last 30 days' and '7 / 30'), 'Reports' (showing 'Read last 30 days' and '22 / 134'), and 'Configuration' (with links to 'Configuration', 'Content Settings', 'Images and Maps', and 'Email Template'). The 'Data Sources' section is expanded, showing a table with columns 'Connection' and 'Description'. The table lists two connections: 'Google Sheets v4' (description: 'Let's connect more data!') and 'Ski Team' (description: 'Ski Team is the demonstration and tutorial database.'). There is an 'Add' button at the bottom right of the table. The 'License Days Left' section shows 'License expires 31 January 2022' and '210 Days'.

3. Click on the **Google Sheets** data source to open it

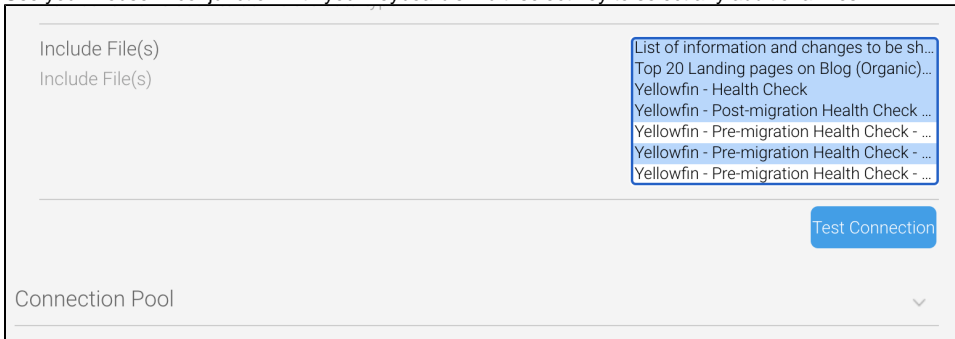
The screenshot shows the 'Google Sheets' connection configuration page. The page has a left sidebar with a 'Need help?' link and an 'Availability' status (Available). The main content area is titled 'Connection' and contains a 'Connection Description' section with a 'Google Sheets' icon and a 'Save' button. Below this is a 'Connection Settings' section with a list of settings: 'Connection Pool', 'Security', 'Access Filters', 'Usage Parameters', and 'Views and Content'. The 'Security' setting is currently set to 'Open'.

4. Click on **Connection Settings**, then scroll down to see the list of currently selected Google sheets

The screenshot shows the 'Google Sheets' connection settings page. The page has a left sidebar with a 'Need help?' link and an 'Availability' status (Available). The main content area is titled 'Connection Settings' and contains a 'Connection Description' section with a 'Google Sheets' icon and a 'Save' button. Below this is a 'Connection Settings' section with a list of settings: 'Connection Pool', 'Security', 'Access Filters', 'Usage Parameters', and 'Views and Content'. The 'Security' setting is currently set to 'Open'. The 'Access Filters' setting is currently set to 'None'. The 'Usage Parameters' setting is currently set to '10'. The 'Views and Content' setting is currently set to 'None'. The 'Test Connection' button is at the bottom right.

5. Hold down your keyboard's multi-select key (eg Ctrl on a PC keyboard or Command on a Mac keyboard) to ensure your currently selected files remain selected (if you don't hold down the key, the current selection will be lost as soon as you select a file)

6. Use your mouse in conjunction with your keyboard's multi-select key to select any additional files



7. When you have selected all relevant files, scroll back to the top of the window and click on the **Save** button

The Google sheets you selected from the file list will now be available within Yellowfin. If you wish to check, reopen the connection and check the file list.

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## Additional info

### Limitations of the Google Sheets API

The Google Sheets connector is dependent on the Google Sheets API which is controlled by Google. Google may at any time change how their API works which may cause the Connector to stop working.

For the latest information on limitations, visit the Google Sheets developer site. <https://developers.google.com/sheets>

Limitation	Description
Clean headers	Column names are decided from the first row of data in Google Sheets. You can rename columns later in Yellowfin; however, the first line in a Google Sheets sheet cannot be blank. Columns without data in the header row are not exposed to the API.
No hierarchies	Yellowfin hierarchies have been disabled for the Google Sheets connector.
Limited filters	Filter Entry Style options are limited for Google Sheets connectors, with filter values manually entered.
New columns in connected sheets	A Yellowfin view contains a list of all columns from a Google Sheet. New columns will appear in the list, but you must add new columns manually for it to appear at report level.
Google Sheets tab names	Avoid using symbols (-,.,*,\$%) in the names of your Google Sheets tabs, as this causes issues with the API.

### Access Refresh Schedule

Google Sheets connection parameters include the Access Token and Refresh Token. This is because Google Sheets access tokens are only valid for a one-hour period, and subsequently need to be refreshed periodically to maintain a connection. Yellowfin automatically refreshes the tokens as a background task, every 50 minutes, ensuring that the connection is always valid.

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