

GOOGLE ANALYTICS

BIGQUERY SETUP



BY HIMANSHU SHARMA
FOUNDER OF OPTIMIZESMART.COM

Google Analytics BigQuery Setup

Written by Himanshu Sharma, Founder of Optimize Smart

© Copyright 2023 Optimize Smart. All rights reserved.

No part of this publication can be reproduced or transmitted in any form or by any means, mechanical or electronic including photocopying and recording or by any information storage and retrieval system, without permission in writing from the author (except by a reviewer, who may quote brief passages and/or show brief video clips in a review).

Disclaimer: Great efforts have been made to ensure the accuracy, timeliness and completeness of the contents (written text, graphics) provided in this book. However neither the author nor Optimize Smart make any guarantee /warranty of accuracy, timeliness and completeness of the information provided in this book or any website this book links out to. No warranty/guarantee may be created or extended by a sales representative or written sales materials. Similarly neither the author nor Optimize Smart make any guarantee/warranty that the websites linked to this book are free from viruses, adware or other malicious programs. Websites listed in this book may have changed or disappeared between when this book was written and when it is read. Neither the author nor Optimize Smart will be liable for any losses or damages (including but not limited to: commercial, special, incidental, consequential damages) arising from the use of the contents in this book. This book is for information purposes only. The advice and strategies contained herein may not be suitable for every situation. If professional assistance is required, the services of a competent consultant/agency should be sought. The fact that an organization or website is referred to in this book, as a citation and/or potential source of further information does not mean that the author or Optimize Smart endorses the information the organization or website may provide and/or recommendations it may make.

About the author

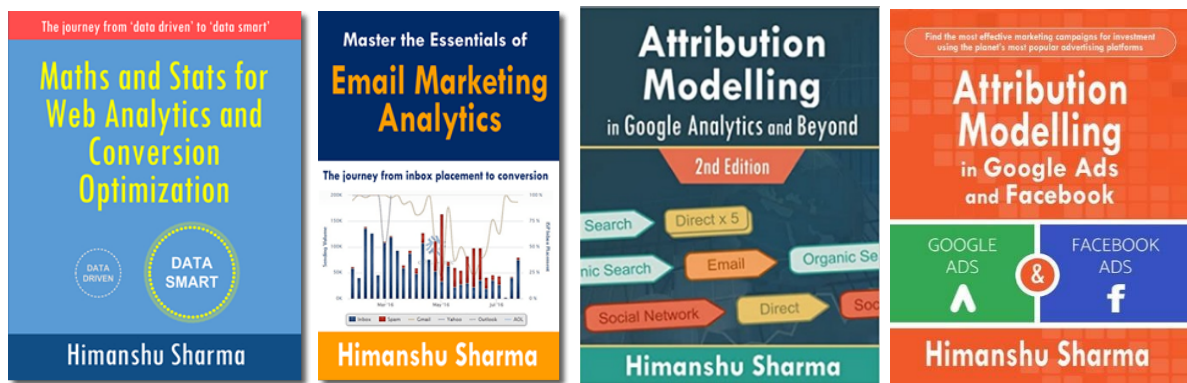
- Founder, OptimizeSmart.com
- Over 15 years of experience in digital analytics and marketing
- Author of four best-selling books on digital analytics and conversion optimization
- Nominated for Digital Analytics Association Awards for Excellence
- Runs one of the most popular blogs in the world on digital analytics
- Consultant to countless small and big businesses over the decade



Website: www.optimizesmart.com

Linkedin: <https://www.linkedin.com/in/analyticsnerd>

Facebook: <https://www.facebook.com/optimizesmart>



Following are our most downloaded ebooks for career advancement:

#1 [Sales and ROI Accelerator \(150+ pages\)](#)

WHAT'S INSIDE: My step-by-step blueprint for generating record sales and ROI by leveraging analytics data.

#2 [Set Up Your Google Analytics 4 \(GA4\) Account Correctly And Fast \(70 pages\)](#)

WHAT'S INSIDE: Learn to set up your GA4 account correctly and fast using this 62 points checklist.

FAQ: Do you show “How” to do each item on the checklist? If so, with screenshots?

Yes. There are links to the articles with detailed step by step instructions.

FAQ: Does this ebook cover GTM too?

Yes.

#3 [Google Tag Manager Data Layers \(100+ pages\)](#)

WHAT'S INSIDE: My step-by-step blueprint for getting started with data layers. Get the only ebook on GTM data layers ever published. Learn the JavaScript behind it.

#4 [Learn to Read E-Commerce Reports in Google Analytics \(100+ pages\)](#)

WHAT'S INSIDE: My step-by-step guide to reading both standard and enhanced e-commerce reports in Google Analytics. E-commerce reports are the most valuable reports in Google Analytics.

#5 **Do you want better skills in digital analytics and marketing? If yes, then [register for the free training:](#)**

Here's what we're going to cover...

1. Why digital analytics is the key to online business success.
2. The number 1 reason why most marketers are not able to scale their advertising and maximize sales.
3. Why Google and Facebook ads don't work for most businesses & how to make them work.
4. Why you won't get any competitive advantage in the marketplace just by knowing Google Analytics.
5. The number 1 reason why conversion optimization is not working for your business.
6. How to advertise on any marketing platform for FREE with an unlimited budget.
7. How to learn and master digital analytics and conversion optimization in record time.

Get helpful tips on a daily basis

If you are the type of person who finds it helpful to receive short tips on building your website traffic, improving conversions, fixing attribution issues and learning about analytics in general, then follow me on LinkedIn. I post a few short tips each day.

[Click here and follow me on LinkedIn](#)

Introduction to BigQuery

Google BigQuery is one of the products of the Google Cloud Platform.

The big query is an enterprise-level data warehouse from Google which is used to provide business intelligence in the form of reports and dashboards.

It is a data storage and management system which is used to bring data from several data sources (like Google Analytics, Google Ads, Facebook etc) for the purpose of reporting and analysis.

When you use BigQuery, you can manipulate Google Analytics data in a way that is many times simply not possible by using the Google Analytics user interface.

For example, certain dimensions and metrics combinations can not be queried together whether you use the Google Analytics user interface or [Google Analytics API](#). But BigQuery has no such limitations.

This is one of the biggest advantages of using BigQuery. It makes advanced data segmentation and analysis possible.

It removes most of the limitations which come when you use the GA user interface or API for querying analytics data.

Prerequisites for using BigQuery

Following are the prerequisites for using Google BigQuery:

#1 You need a good working knowledge of SQL so that you can query data in BigQuery. This is the primary requirement.

#2 You need a Google Cloud Platform account with billing enabled. In order to enable the billing, you would need a valid credit card.

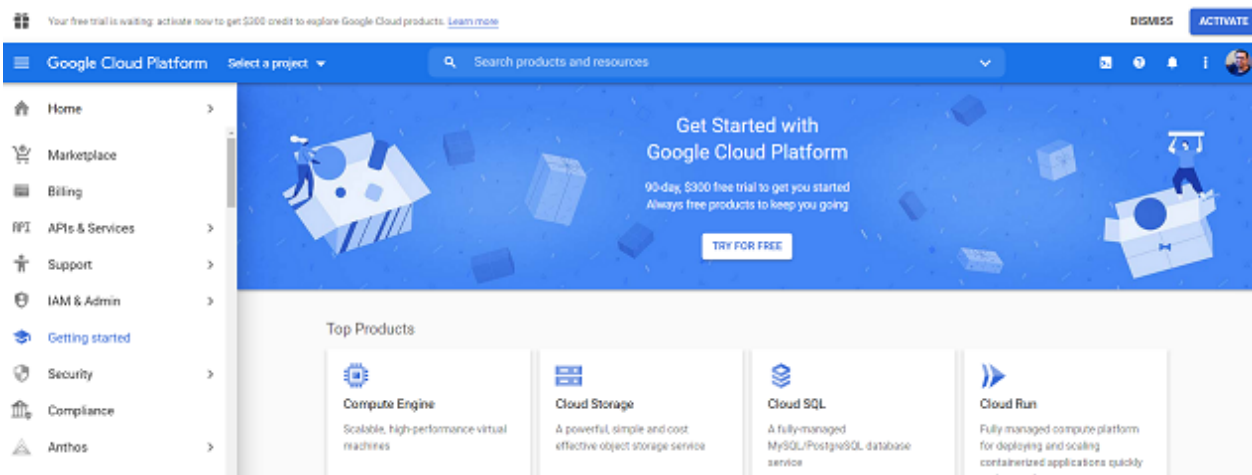
How to send Google Analytics data to BigQuery without using Google Analytics 360

Normally you would require access to GA360 in order to send Google Analytics (aka Universal Analytics) data to BigQuery.

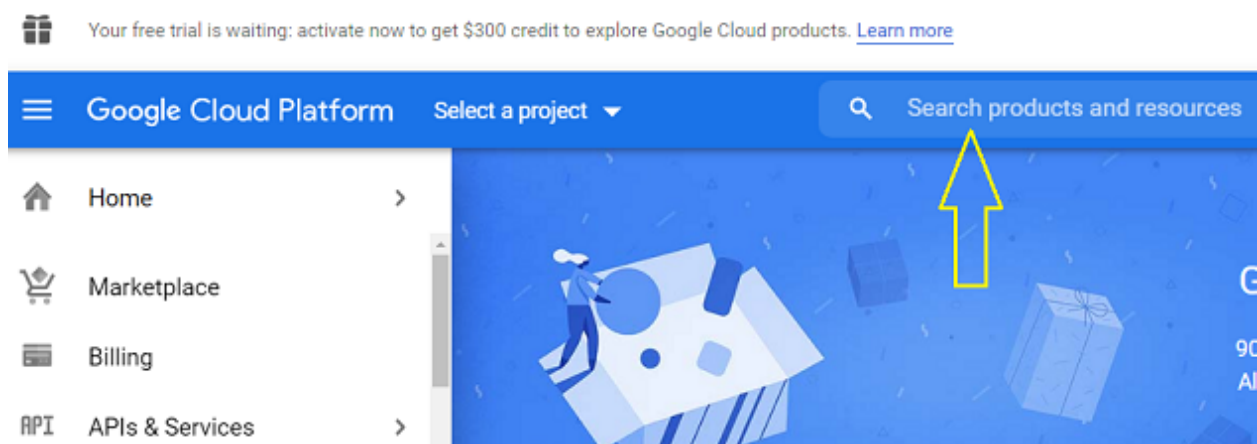
But with the help of a third-party solution/connector, it is possible to send data from Google Analytics to BigQuery without 360.

Note: Here I am assuming that you are using the Google Cloud Platform for the first time.

You should now see a screen like the one below:

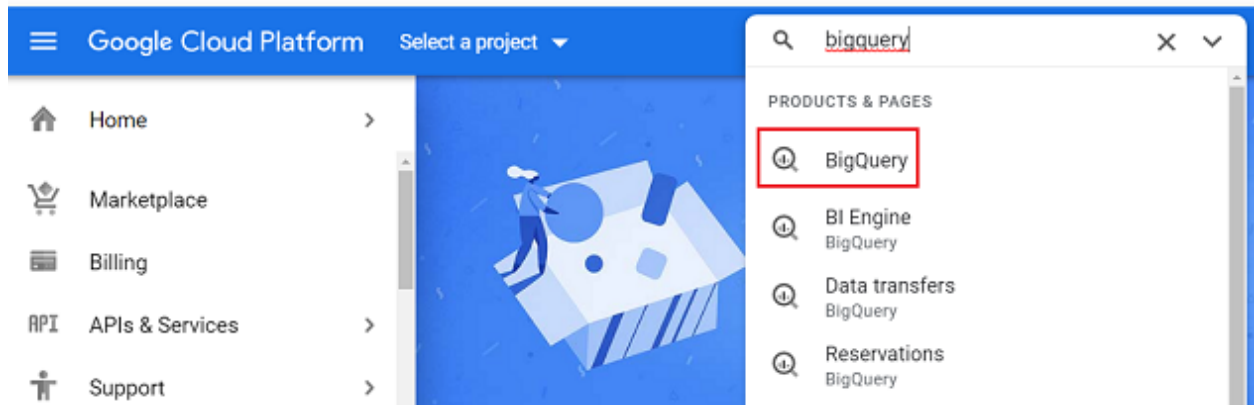


Step-3: Type 'bigquery' in the search box:

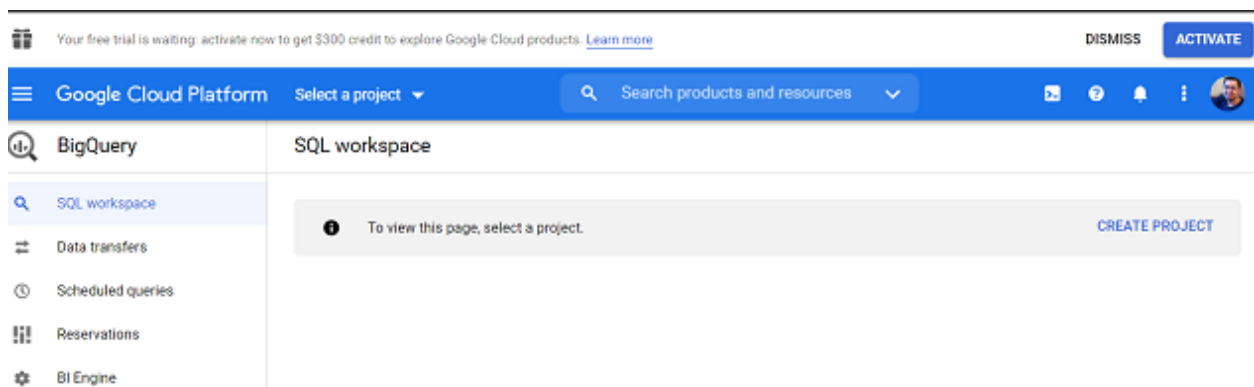


Step-4: Click on the first search result:

 Your free trial is waiting: activate now to get \$300 credit to explore Google Cloud products. [Learn more](#)



You should now see a screen like the one below:



Step-5: Click on the 'CREATE PROJECT' button:

Select a project Search products and resources

SQL workspace

i To view this page, select a project.

[CREATE PROJECT](#)



Step-6: Name your project (say 'Google Analytics'):

Google Cloud Platform Search

New Project

⚠ You have 12 projects remaining in your quota. Request an increase or delete projects. [Learn more](#)

[MANAGE QUOTAS](#)

Project name *

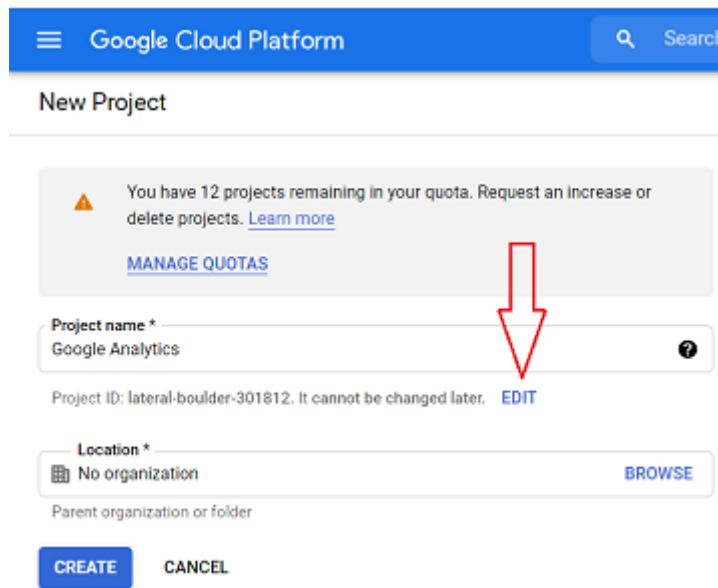
Project ID: lateral-boulder-301812. It cannot be changed later. [EDIT](#)

Location *
 [BROWSE](#)

Parent organization or folder

[CREATE](#) [CANCEL](#)

Step-7: Click on the 'EDIT' button to change the project ID:



Google Cloud Platform

New Project

You have 12 projects remaining in your quota. Request an increase or delete projects. [Learn more](#)

[MANAGE QUOTAS](#)

Project name *
Google Analytics

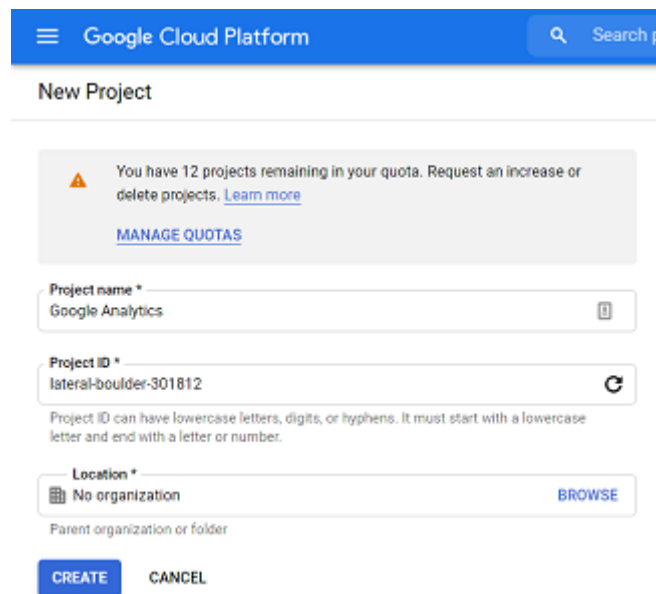
Project ID: lateral-boulder-301812. It cannot be changed later. [EDIT](#)

Location *
No organization [BROWSE](#)

Parent organization or folder

[CREATE](#) [CANCEL](#)

You should now see a screen like the one below:



Google Cloud Platform

New Project

You have 12 projects remaining in your quota. Request an increase or delete projects. [Learn more](#)

[MANAGE QUOTAS](#)

Project name *
Google Analytics

Project ID *
lateral-boulder-301812

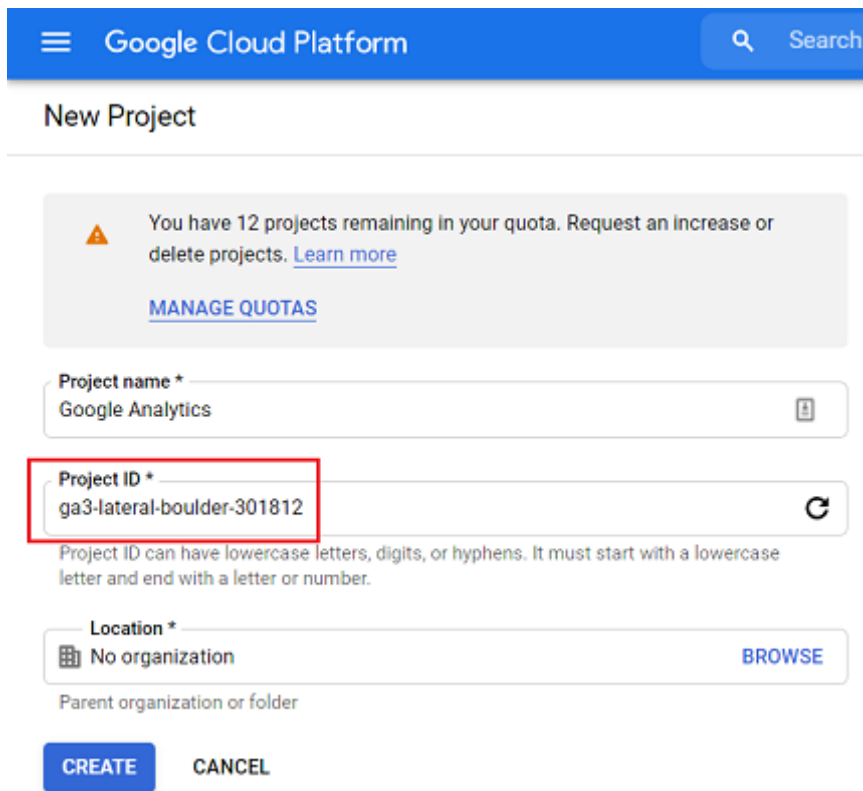
Project ID can have lowercase letters, digits, or hyphens. It must start with a lowercase letter and end with a letter or number.

Location *
No organization [BROWSE](#)

Parent organization or folder

[CREATE](#) [CANCEL](#)

Step-8: Change the project ID to something which is easier to recognize:



Google Cloud Platform

New Project

You have 12 projects remaining in your quota. Request an increase or delete projects. [Learn more](#)

[MANAGE QUOTAS](#)

Project name *
Google Analytics

Project ID *
ga3-lateral-boulder-301812

Project ID can have lowercase letters, digits, or hyphens. It must start with a lowercase letter and end with a letter or number.

Location *
No organization [BROWSE](#)

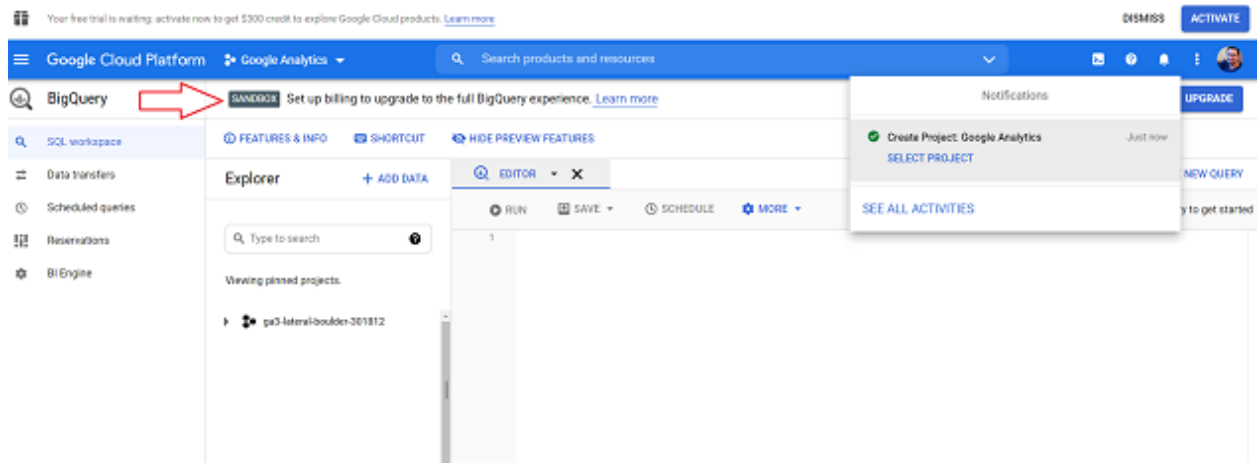
Parent organization or folder

[CREATE](#) [CANCEL](#)

Note: Finding a meaningful project ID is not going to be easy as many IDs have already been taken. Once you change the ID, you cannot change it later.

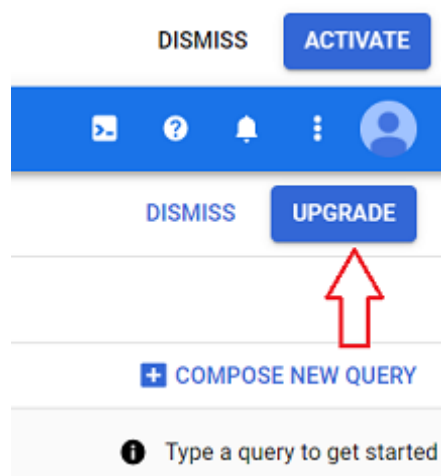
Step-9: Click on the 'Create' button.

You should now see a screen like the one below:

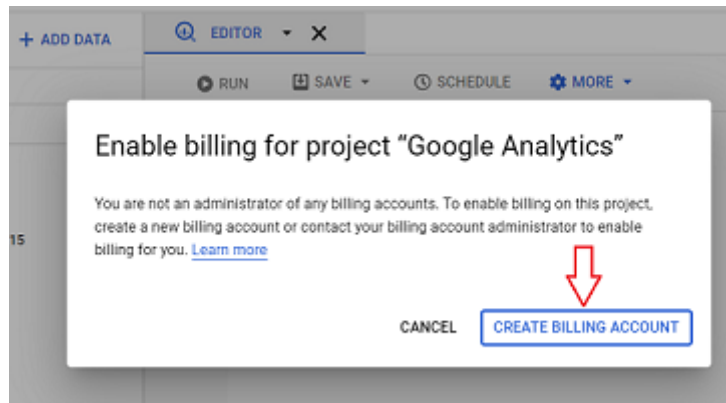


You now have access to the **BigQuery sandbox**.

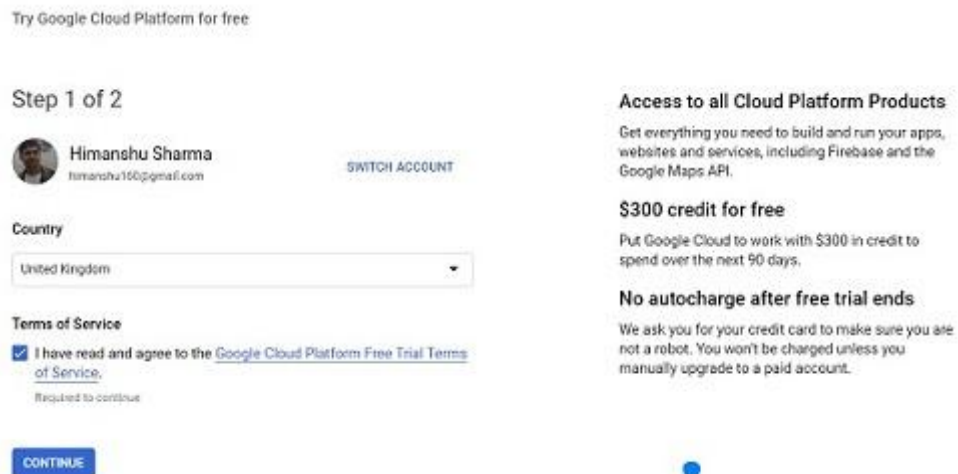
Step-10: Click on the 'Upgrade' button at the top right-hand side:



Step-11: Click on the 'CREATE BILLING ACCOUNT' button:



Step-12: Select your billing country from the ‘Country’ drop-down menu and then read and accept the terms of service by clicking on the checkbox:



Step-13: Click on the ‘Continue’ button.

Step-14: Set your account type, enter tax information, name, address and credit card details and then click on the ‘START MY FREE TRIAL’ button:

Try Google Cloud Platform for free

Step 2 of 2

Your payment information helps us reduce fraud and abuse. **You won't be charged unless you turn on automatic billing.**

Customer info

 Account type ⓘ 
Business

 Tax information ⓘ 
Tax status: Business

 Name and address ⓘ

Business name

Name

Name is required

Address line 1

Access to all Cloud Platform Products

Get everything you need to build and run your apps, websites and services, including Firebase and the Google Maps API.

\$300 credit for free

Put Google Cloud to work with \$300 in credit to spend over the next 90 days.

No autocharge after free trial ends

We ask you for your credit card to make sure you are not a robot. You won't be charged unless you manually upgrade to a paid account.



How you pay

 Automatic payments

You pay for this service only after you accrue costs, via an automatic charge when you reach your billing threshold or 30 days after your last automatic payment, whichever comes first.

This service can only be used for business or commercial reasons. You are responsible for assessing and reporting VAT.

Payment method ⓘ

 Add credit or debit card

Card details

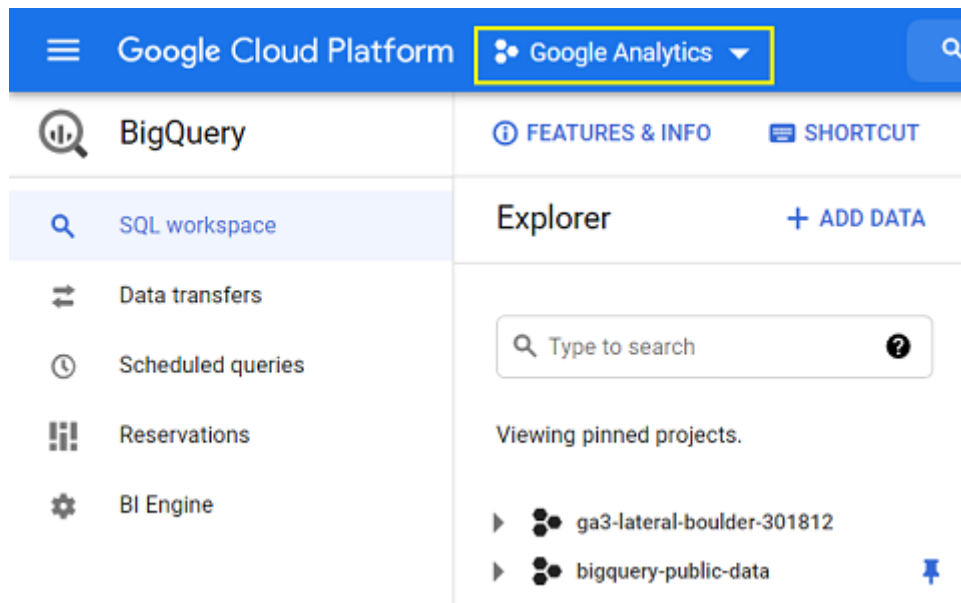
Credit or debit card address is same as above

The personal information you provide here will be added to your payments profile. It will be stored securely and treated in accordance with the [Google Privacy Policy](#).

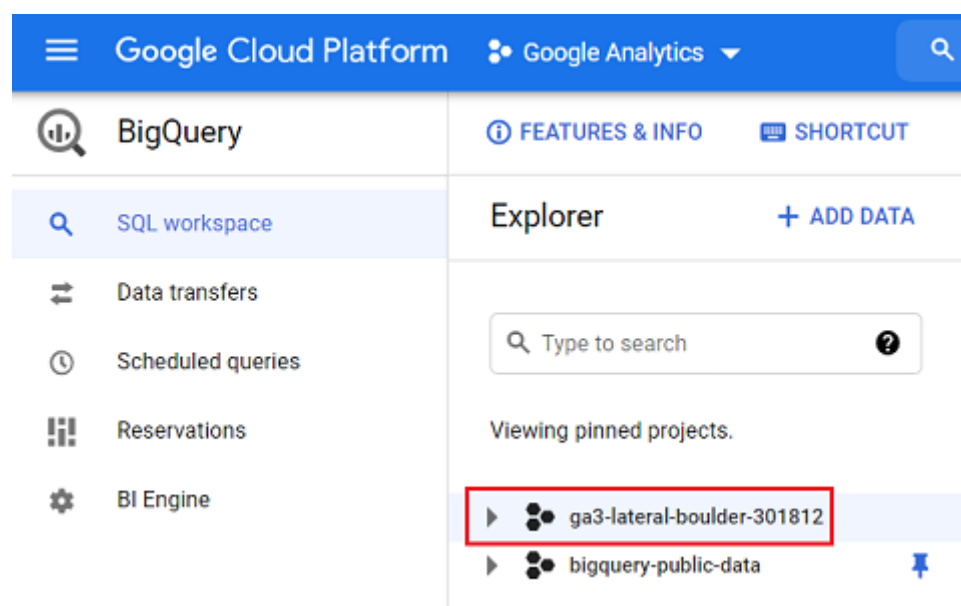


START MY FREE TRIAL

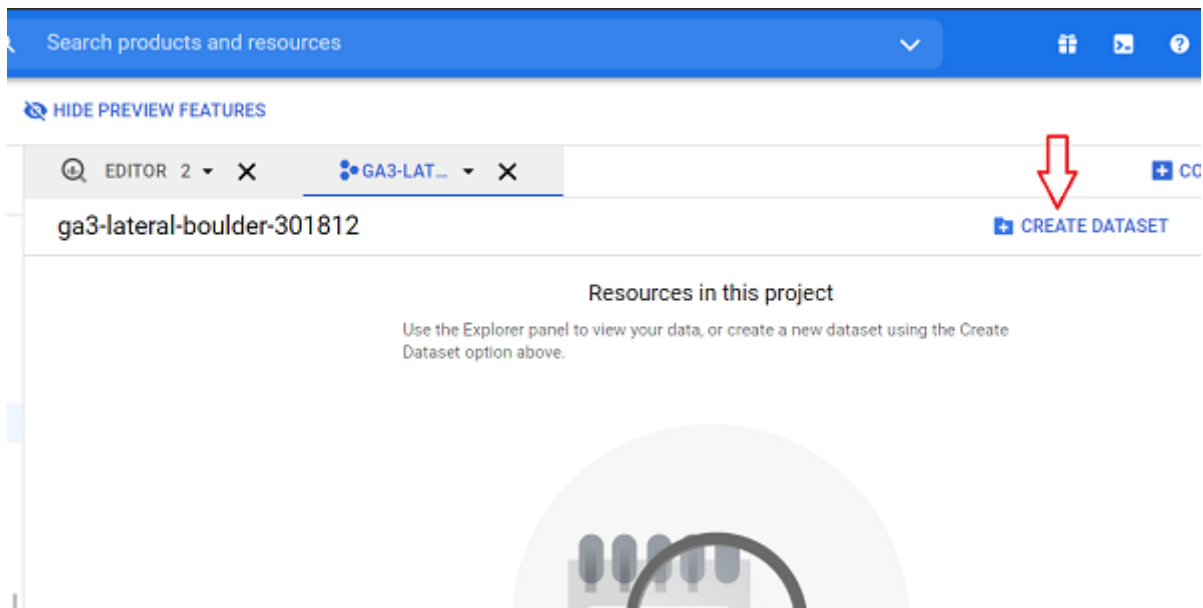
Step-15: Navigate to <https://console.cloud.google.com/bigquery> and make sure that 'Google Analytics' project is selected.



Step-16: Click on your project ID (this ID could be different in your case):



Step-17: On the right-hand side of your screen, find and click on the button 'Create Dataset':



Step-18: Name your dataset (say ***GA_data_set***) and then click on the 'Create dataset' button at the bottom:

Create dataset

Dataset ID

Data location (Optional) ?

Default

Default table expiration ?

Never


Number of days after table creation:

Encryption

Data is encrypted automatically. Select an encryption key mar

Google-managed key
No configuration required

Customer-managed key
Manage via Google Cloud Key Management Service



We are going to use this new data set for storing data from Google Analytics.

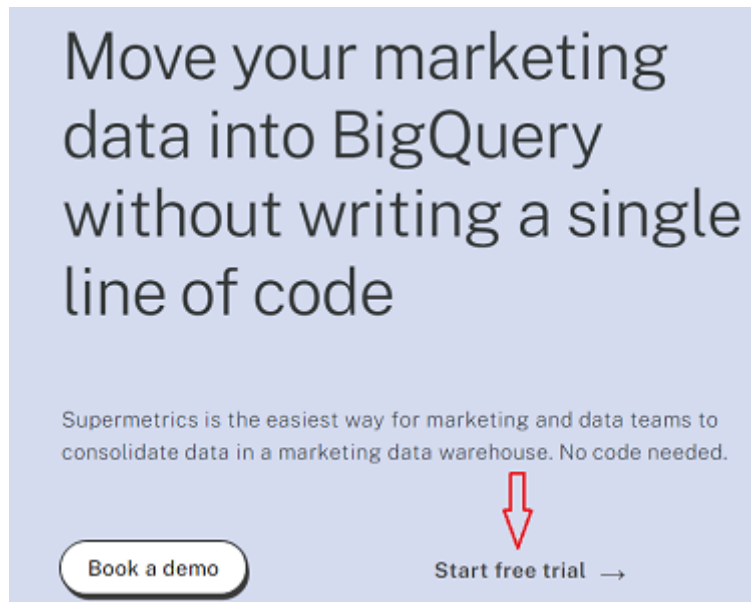
You would now need to use a third-party solution for sending Google Analytics data to BigQuery. This is going to cost you based on your account usage.

Regardless of how much it costs you, it would most likely still be cheaper than paying \$150k per year to Google for using the [GA360](#) (which comes with the free connection to BigQuery).

You can either search for such third-party solutions online or use the one that I use which is '[Supermetrics for BigQuery](#)'. They provide a free 14 days trial of their solution. No credit card is required.

Step-19: Navigate to '[Supermetrics for BigQuery](#)' page.

Step-20: Click on the 'Start a free trial' button:



Step-21: Fill out the form and then click on the 'Send' button:

Industry Business email *

Phone number United Kingdom

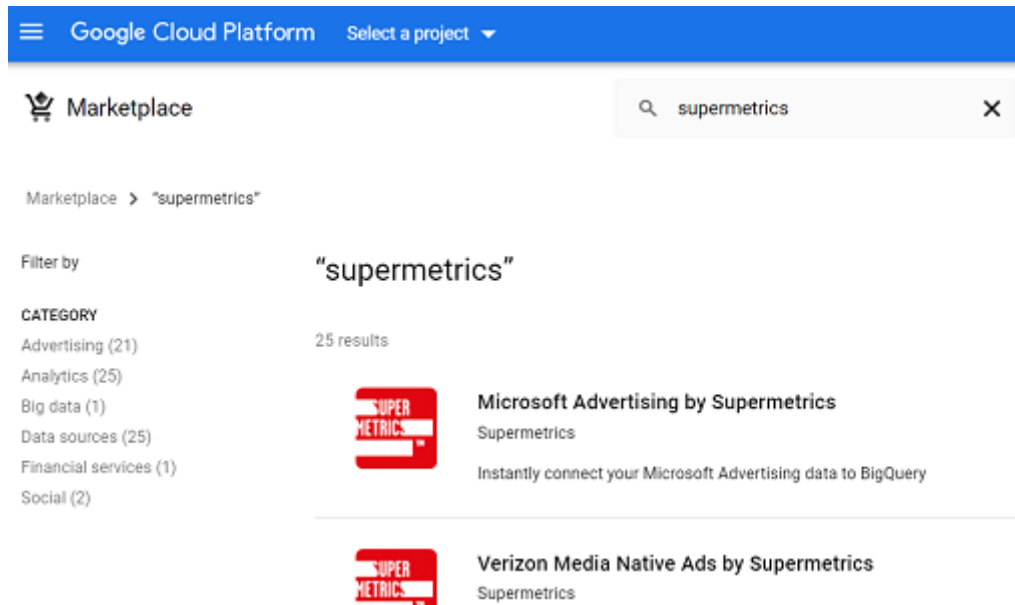
Which Supermetrics product are you interested in? *

Optional message (product requirements or questions)

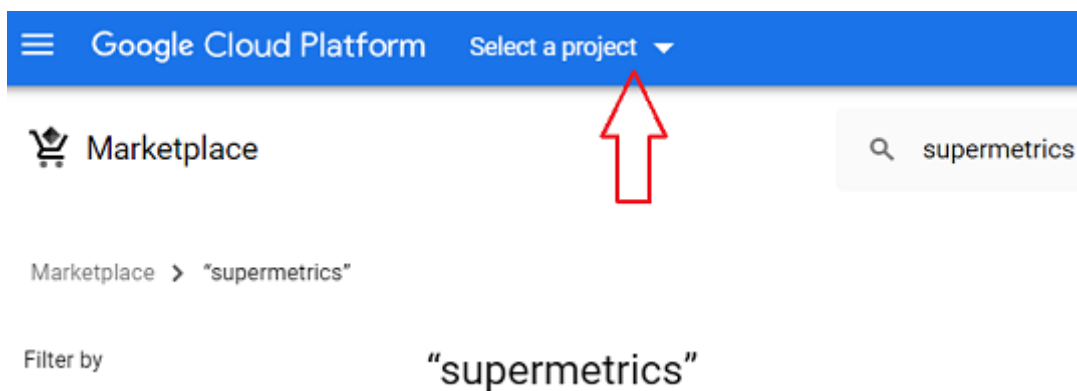
* required field

Send

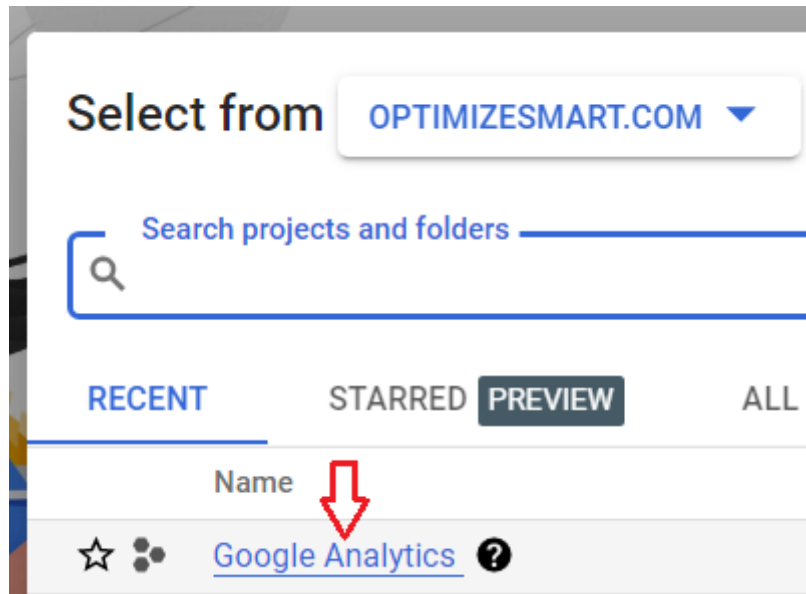
You should now be redirected to the page like the one below in your Google Cloud platform account:



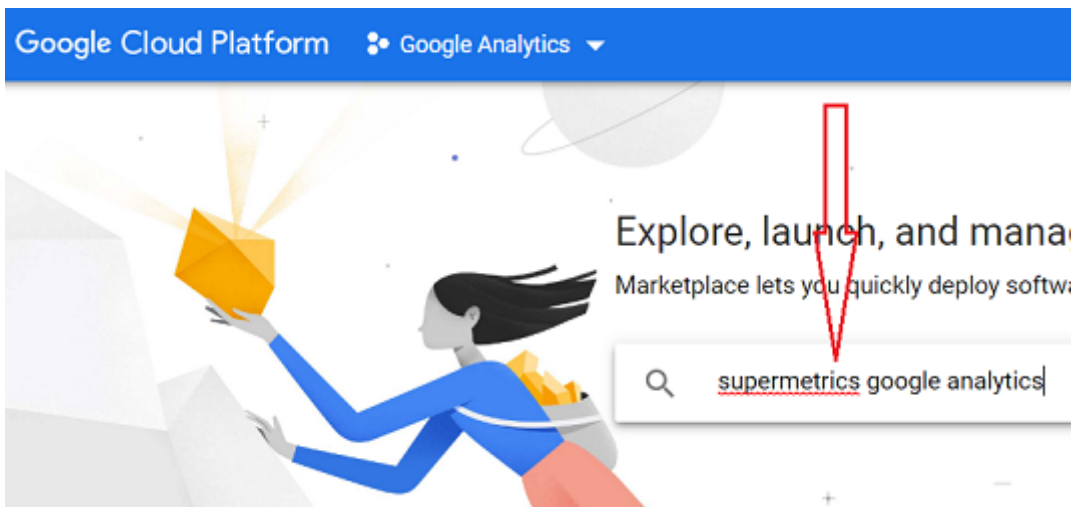
Step-22: Click on the 'Select a project' drop-down menu:



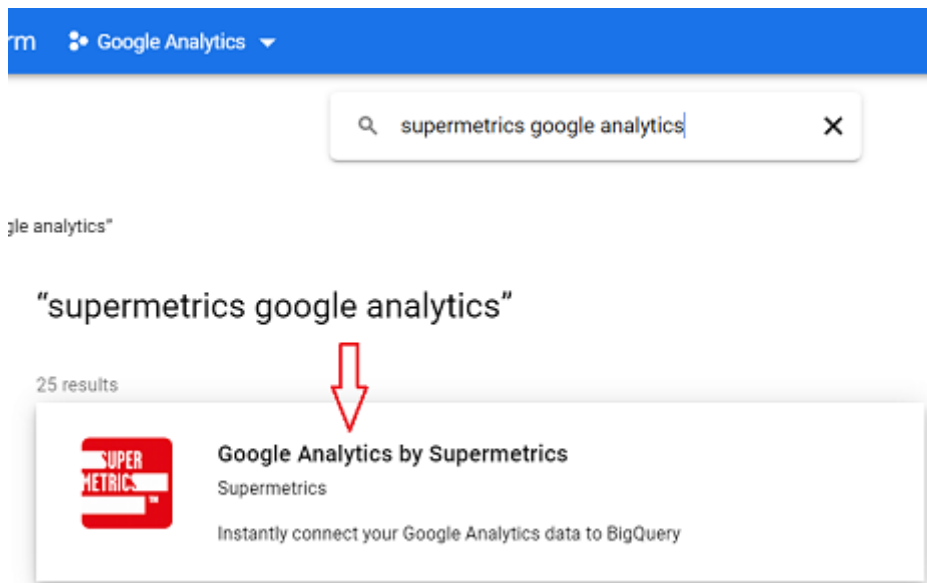
Step-23: Click on 'Google Analytics' project:



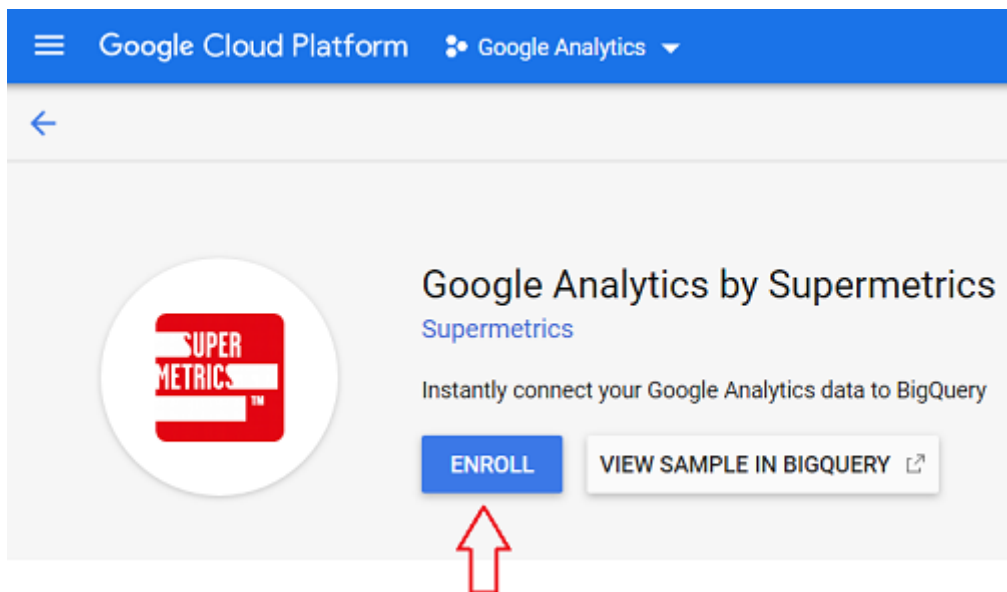
Step-24: Type 'supermetrics google analytics' in the search box:



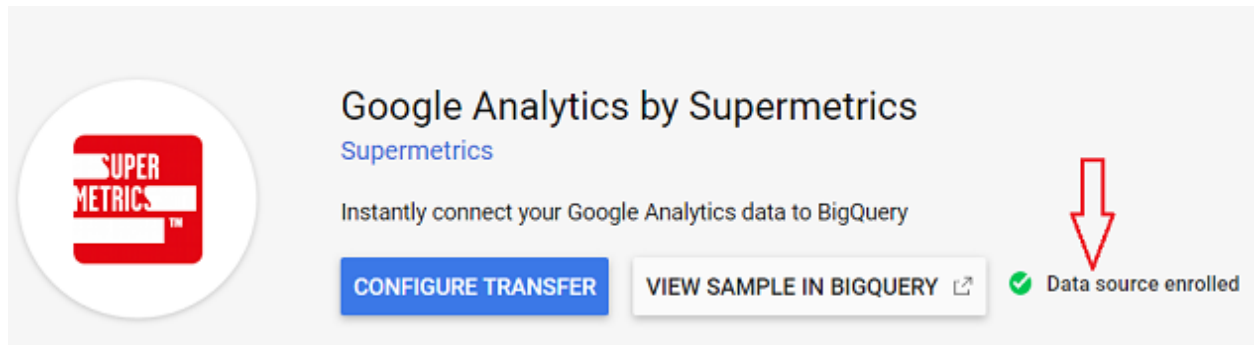
Step-25: Press the enter key and then click on 'Google Analytics by Supermetrics':



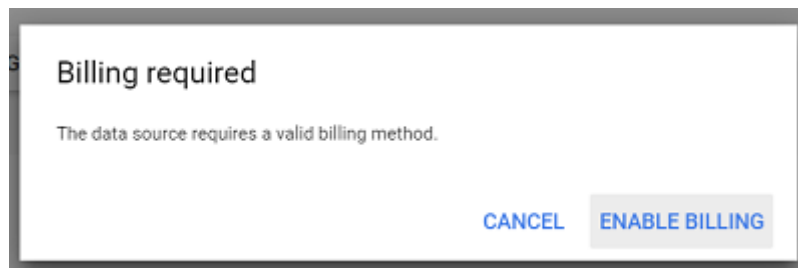
Step-26: Click on the ‘Enroll’ button:



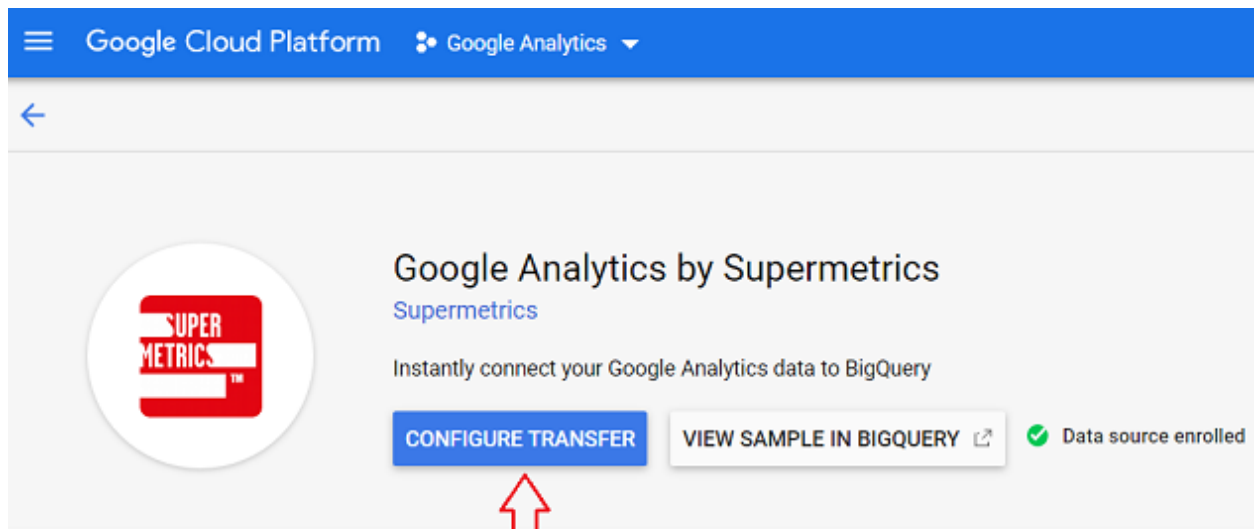
You should now see the ‘**Data Source enrolled**’ status:



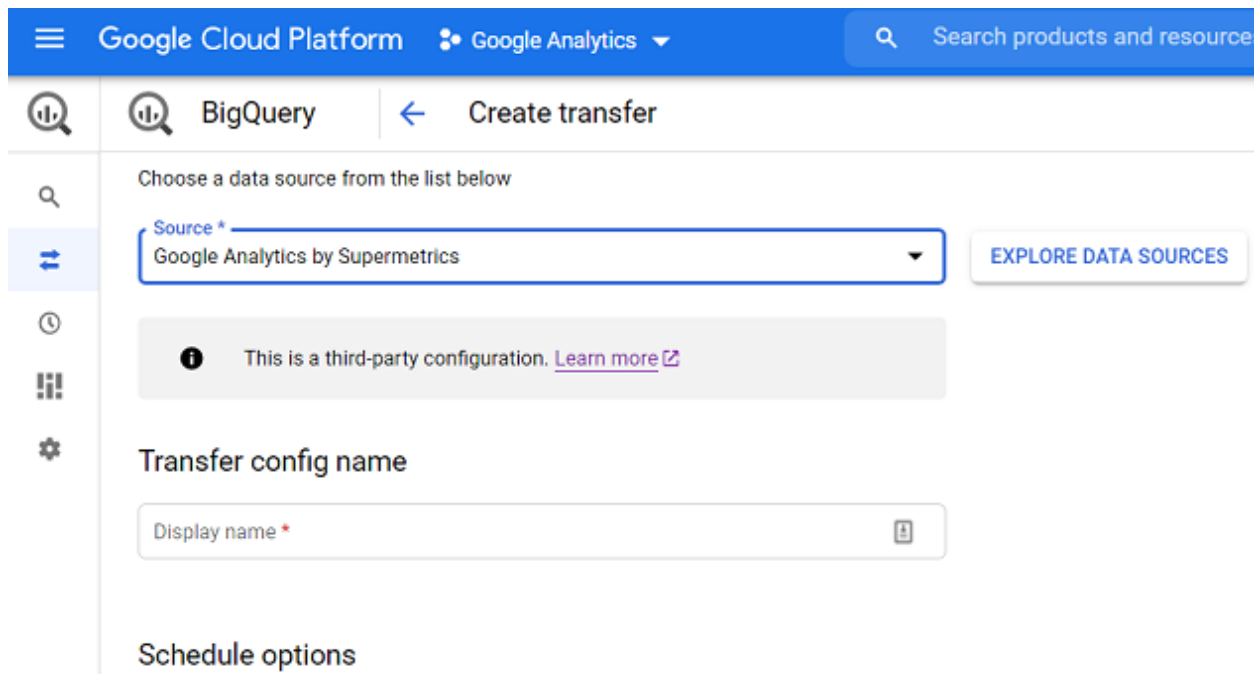
Note: If you are using the BigQuery Sandbox then you will not be able to enrol as this Supermetrics connector requires active billing. So when you click on the ‘Enroll’ button, you should see a message box like the one below:



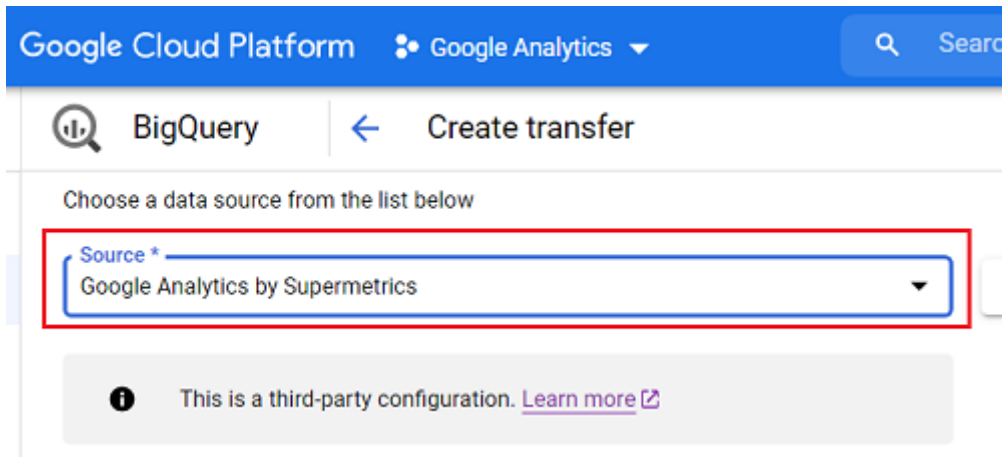
Step-27: Click on the ‘CONFIGURE TRANSFER’ button:



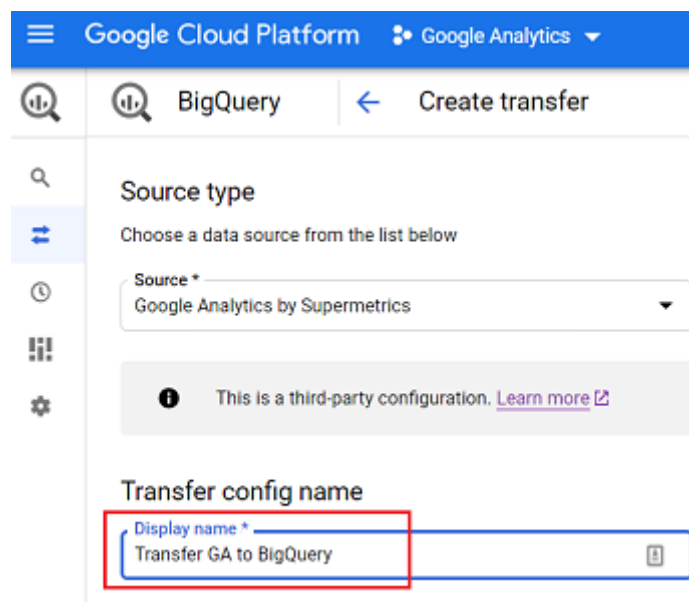
You should now see a screen like the one below which is about **creating a data transfer**:



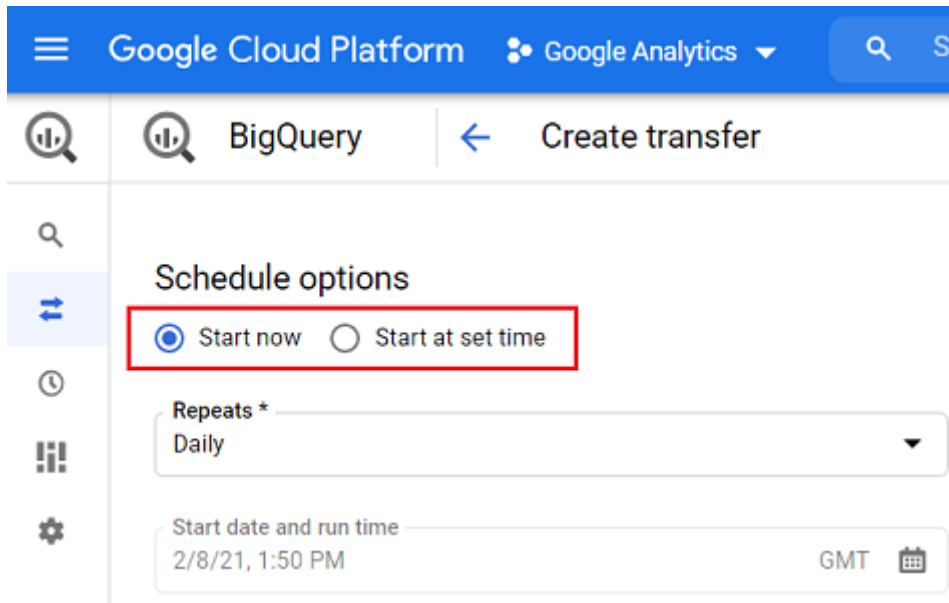
Step-28: Keep the data source ('Google Analytics by Supermetrics') intact and move on to the next step:



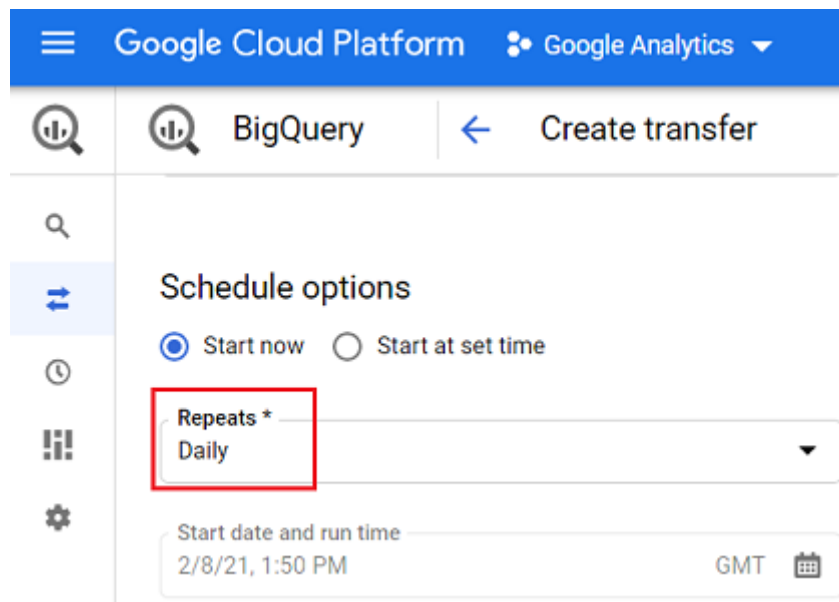
Step-29: Type a meaningful name for the 'Transfer config name' field:



Step-30: Keep the scheduling options (which specify when the transfer will run) to 'Start now' (unless you want to change it) and move on to the next step:

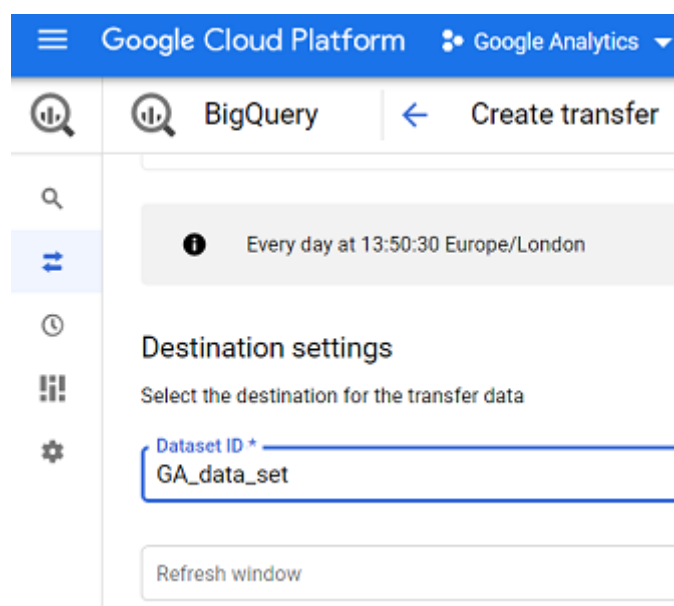
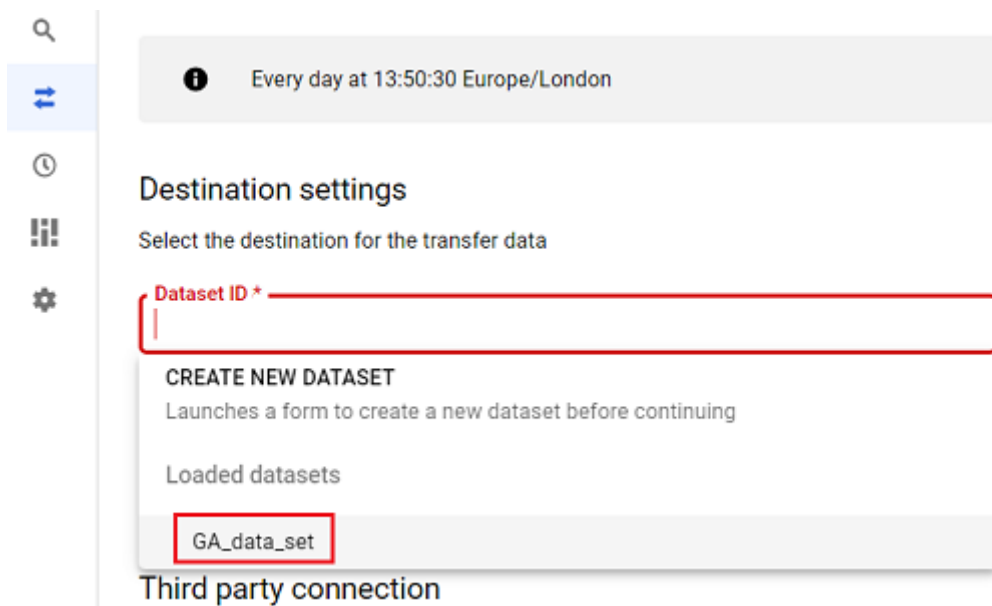


Step-31: Keep the 'Repeats' setting to 'Daily' to have new data added once a day and move on to the next step:



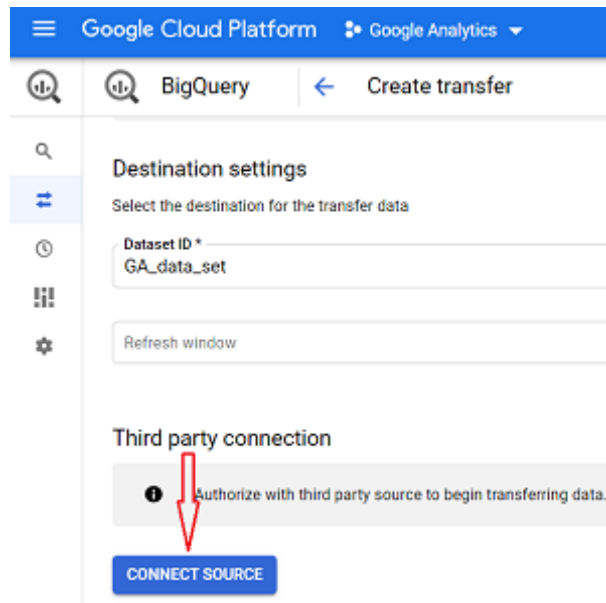
Note: The 'Start date and run time' setting is locked for editing when the 'Start now' setting is selected.

Step-32: Select the data set you created earlier from the drop-down menu:

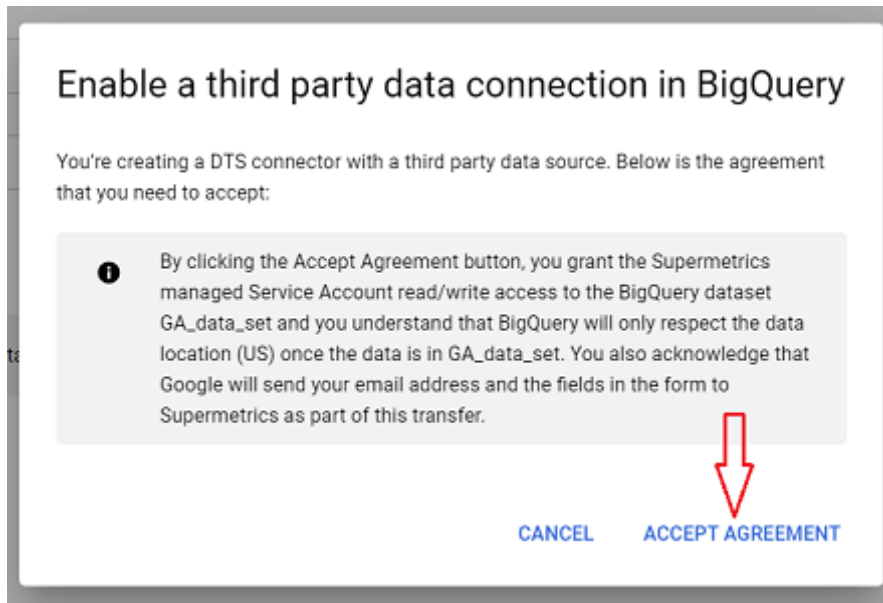


We are going to use this data set for storing Google Analytics data in BigQuery.

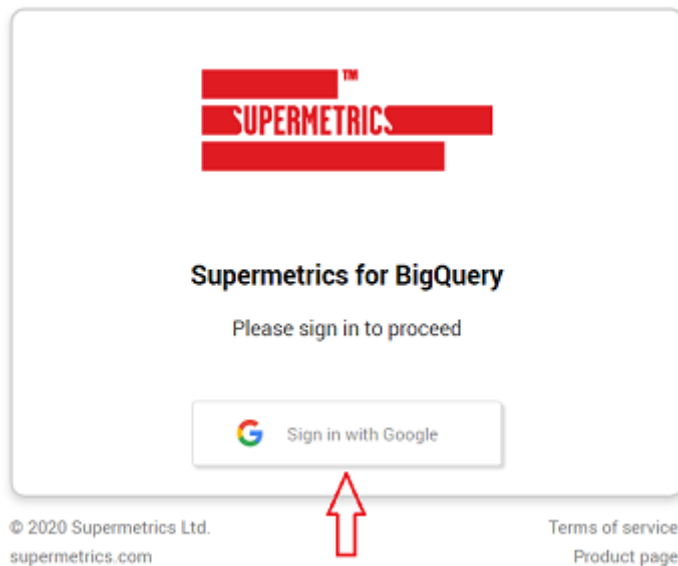
Step-33: Click on the 'CONNECT SOURCE' button:



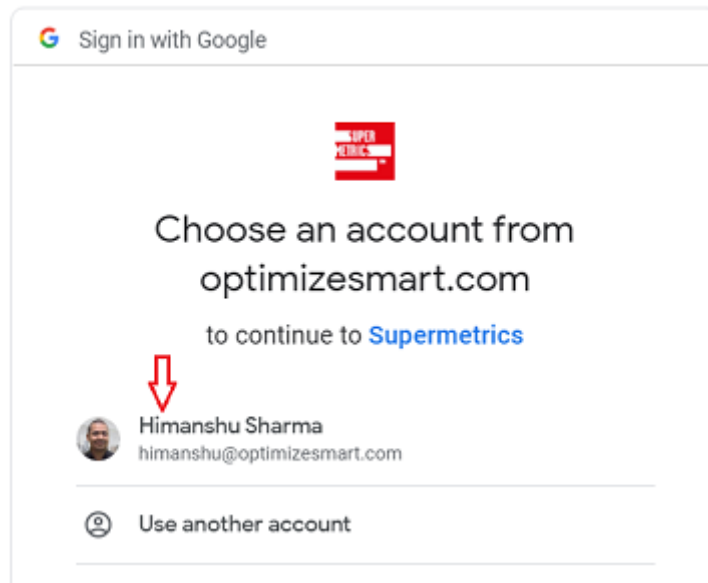
Step-34: Click on the 'Accept Agreement' button:



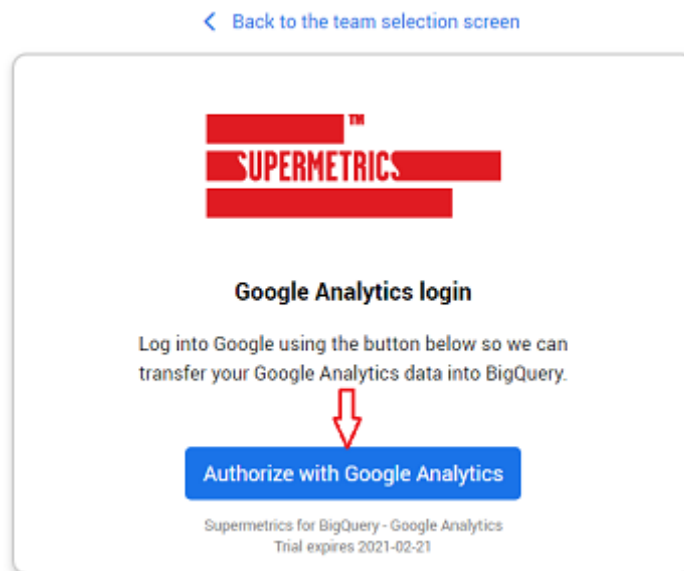
Step-35: Click on 'Sign in with Google' button:



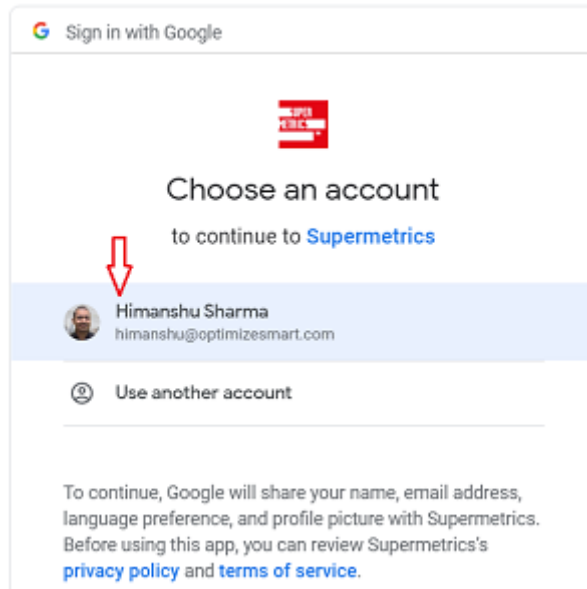
Step-36: Click on the name of the Google account which is associated with both your Google Analytics account and BigQuery project:



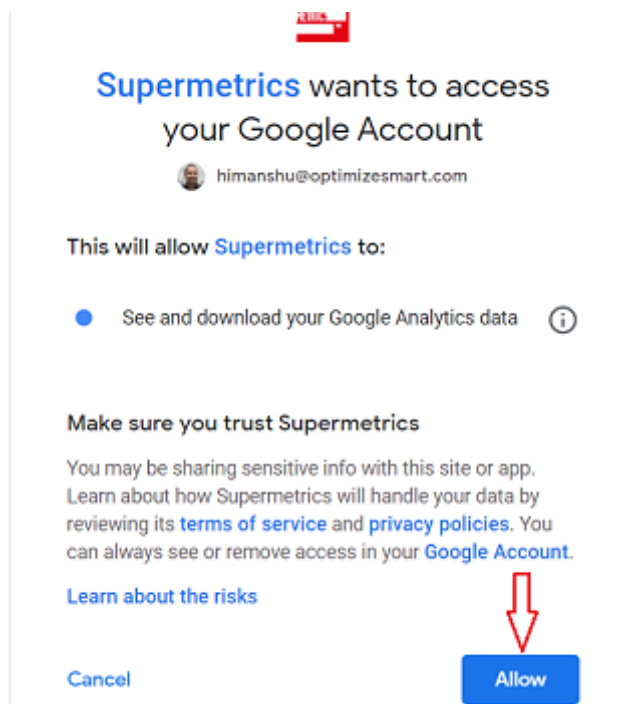
Step-37: Click on the button 'Authorize with Google Analytics':



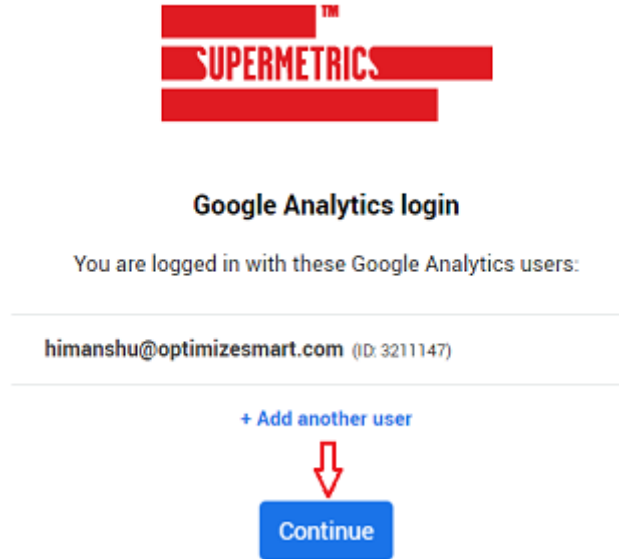
Step-38: Click on the name of the Google account which is associated with your Google Analytics account:



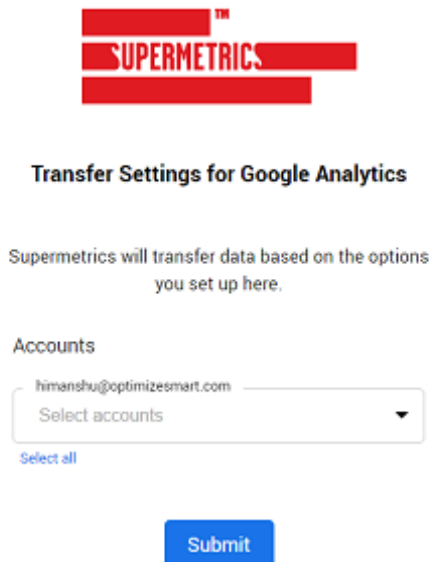
Step-39: Click on the 'Allow' button:



Step-40: Click on the 'Continue' button:



You should now see a screen like the one below:



Step-41: Select the Google Analytics view (from which you send data to BigQuery) from the 'Accounts' drop-down menu:



Transfer Settings for Google Analytics

Supermetrics will transfer data based on the options you set up here.

Accounts

himanshu@optimizesmart.com

Optimize Smart Live Property: x

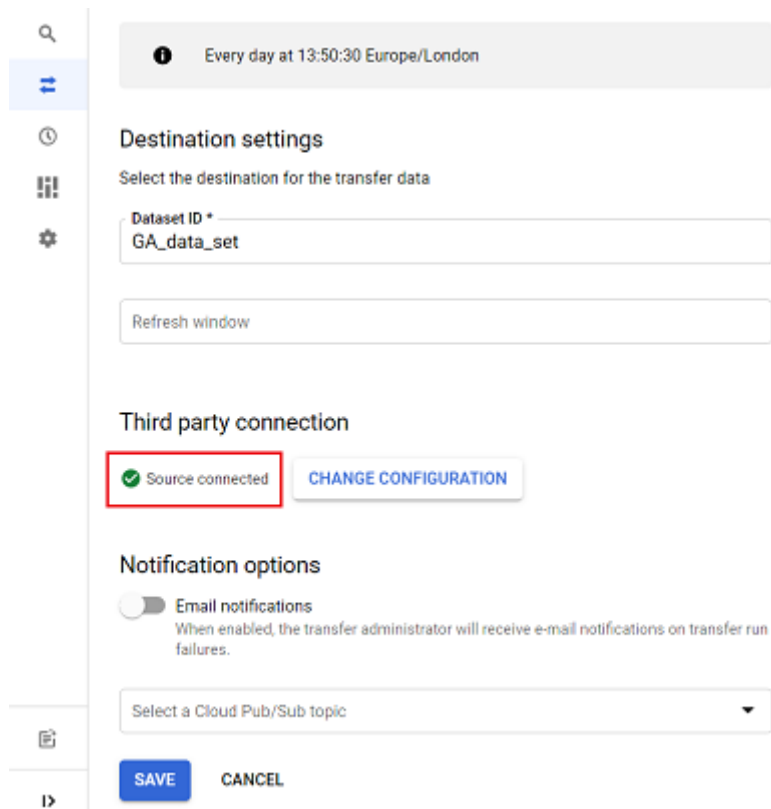
Optimize Smart Main View x

Select all

Submit

Step-42: Click on the 'Submit' button.

You should now see the '**Source Connected**' message below '**Third party connection**':



Every day at 13:50:30 Europe/London

Destination settings

Select the destination for the transfer data

Dataset ID *
GA_data_set

Refresh window

Third party connection

✓ Source connected [CHANGE CONFIGURATION](#)

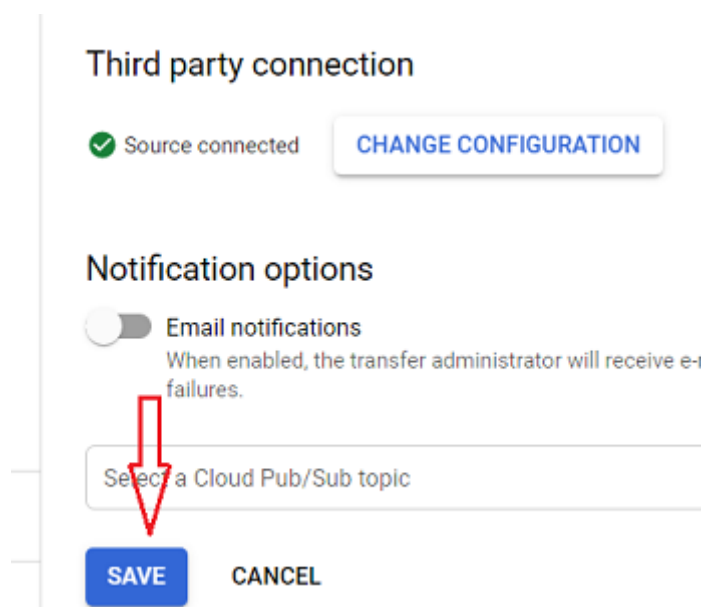
Notification options

Email notifications
When enabled, the transfer administrator will receive e-mail notifications on transfer run failures.

Select a Cloud Pub/Sub topic

[SAVE](#) [CANCEL](#)

Step-43: Click on the 'SAVE' button to save the transfer and also start the initial data transfer:



Third party connection

✓ Source connected [CHANGE CONFIGURATION](#)

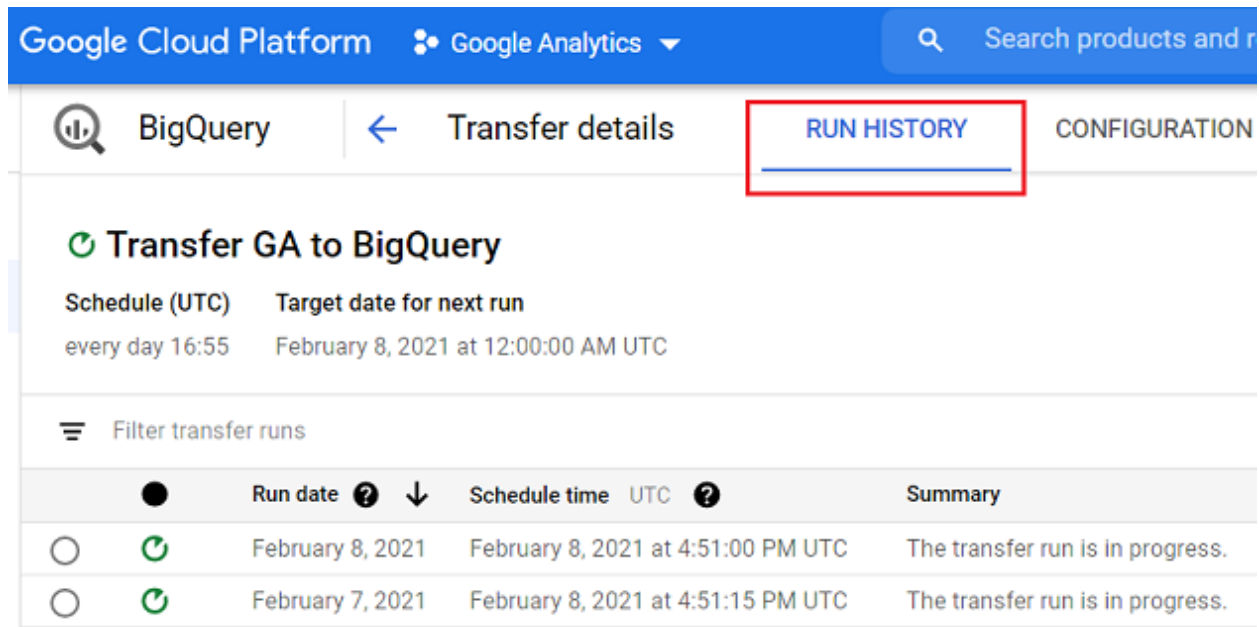
Notification options

Email notifications
When enabled, the transfer administrator will receive e-mail notifications on transfer run failures.

Select a Cloud Pub/Sub topic

[SAVE](#) [CANCEL](#)

You should now see a screen like the one below:



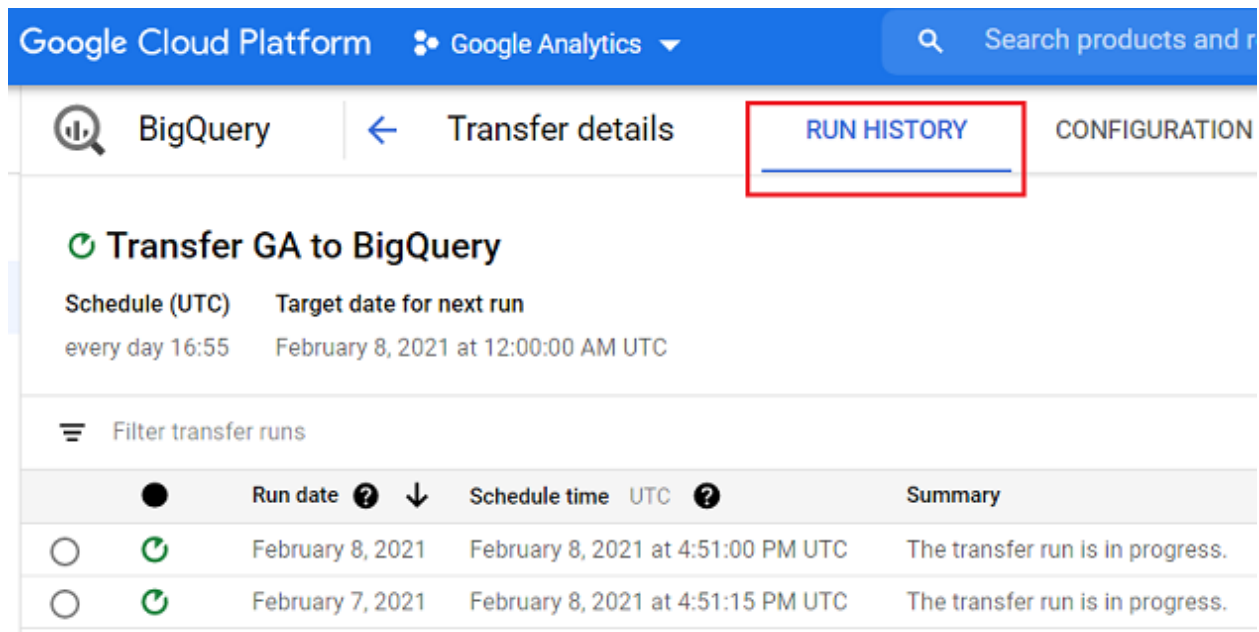
The screenshot shows the Google Cloud Platform interface for configuring a data transfer. The top navigation bar includes 'Google Cloud Platform', 'Google Analytics', and a search bar. Below this, the breadcrumb trail shows 'BigQuery' > 'Transfer details' > 'RUN HISTORY' (highlighted with a red box) > 'CONFIGURATION'. The main content area is titled 'Transfer GA to BigQuery' and displays the following details:

- Schedule (UTC):** every day 16:55
- Target date for next run:** February 8, 2021 at 12:00:00 AM UTC

Below the details is a 'Filter transfer runs' section and a table of transfer runs:

	●	Run date ? ↓	Schedule time UTC ?	Summary
<input type="radio"/>	🔄	February 8, 2021	February 8, 2021 at 4:51:00 PM UTC	The transfer run is in progress.
<input type="radio"/>	🔄	February 7, 2021	February 8, 2021 at 4:51:15 PM UTC	The transfer run is in progress.

Through the 'Run History' section, you can monitor the current progress of all of your data transfers.



Google Cloud Platform Google Analytics Search products and r

BigQuery Transfer details **RUN HISTORY** CONFIGURATION

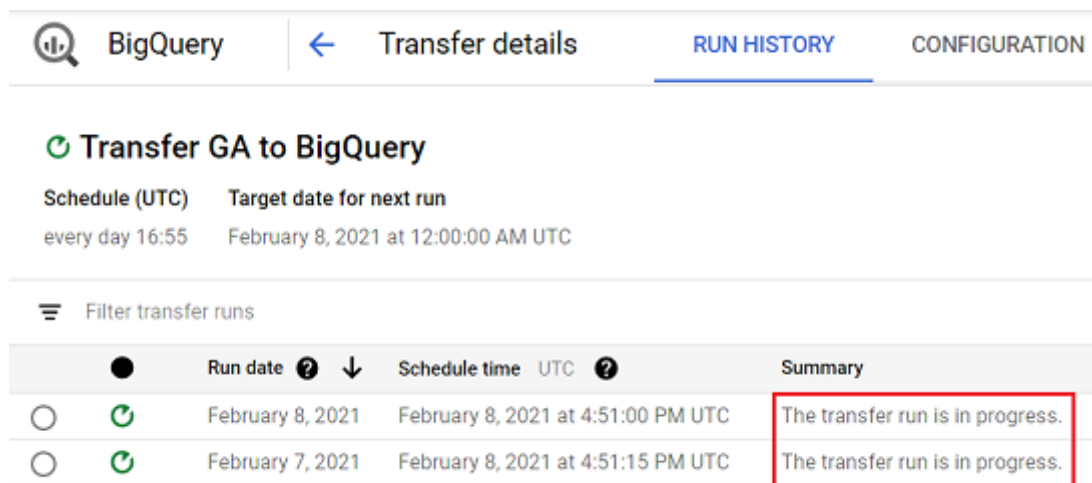
Transfer GA to BigQuery

Schedule (UTC) Target date for next run
 every day 16:55 February 8, 2021 at 12:00:00 AM UTC

Filter transfer runs

	Run date ? ↓	Schedule time UTC ?	Summary
○	February 8, 2021	February 8, 2021 at 4:51:00 PM UTC	The transfer run is in progress.
○	February 7, 2021	February 8, 2021 at 4:51:15 PM UTC	The transfer run is in progress.

When the data transfer is in progress you see the message ‘The transfer run is in progress:



BigQuery Transfer details **RUN HISTORY** CONFIGURATION

Transfer GA to BigQuery

Schedule (UTC) Target date for next run
 every day 16:55 February 8, 2021 at 12:00:00 AM UTC

Filter transfer runs

	Run date ? ↓	Schedule time UTC ?	Summary
○	February 8, 2021	February 8, 2021 at 4:51:00 PM UTC	The transfer run is in progress.
○	February 7, 2021	February 8, 2021 at 4:51:15 PM UTC	The transfer run is in progress.

When the data transfer is complete you see the message ‘The transfer run has completed successfully:

BigQuery [← Transfer details](#) **RUN HISTORY** [CONFIGURATION](#)

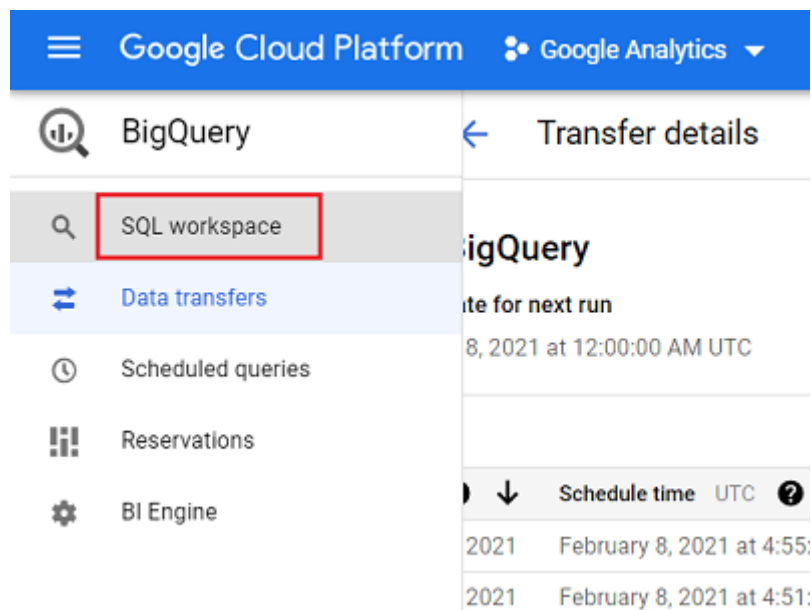
Transfer GA to BigQuery

Schedule (UTC) Target date for next run
 every day 16:55 February 8, 2021 at 12:00:00 AM UTC

Filter transfer runs

	Run date	Schedule time	UTC	Summary
<input checked="" type="checkbox"/>	February 8, 2021	February 8, 2021 at 4:55:00 PM	UTC	The transfer run has completed successfully.
<input checked="" type="checkbox"/>	February 8, 2021	February 8, 2021 at 4:51:00 PM	UTC	The transfer run has completed successfully.

Step-44: Click on the 'SQL WORKSPACE' link from the left-hand side navigation:



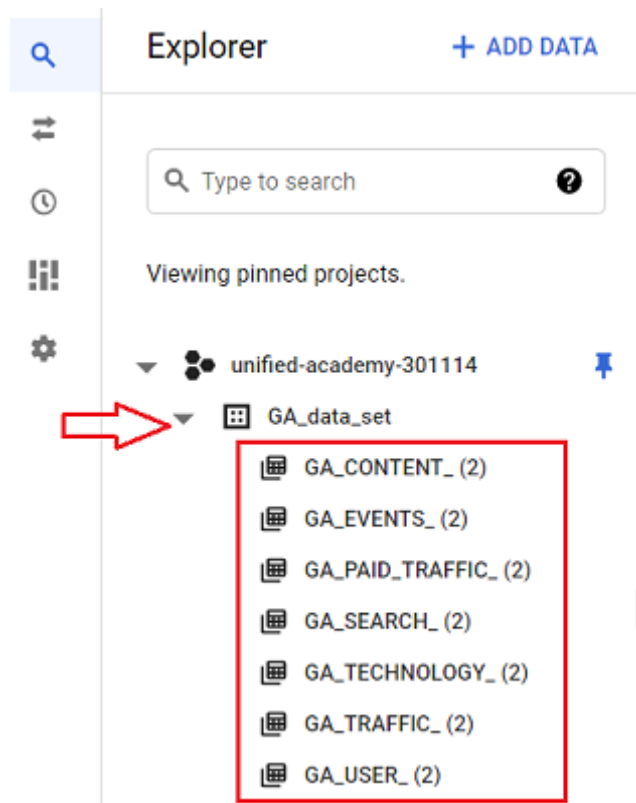
Google Cloud Platform Google Analytics

BigQuery [← Transfer details](#)

- SQL workspace**
- Data transfers
- Scheduled queries
- Reservations
- BI Engine

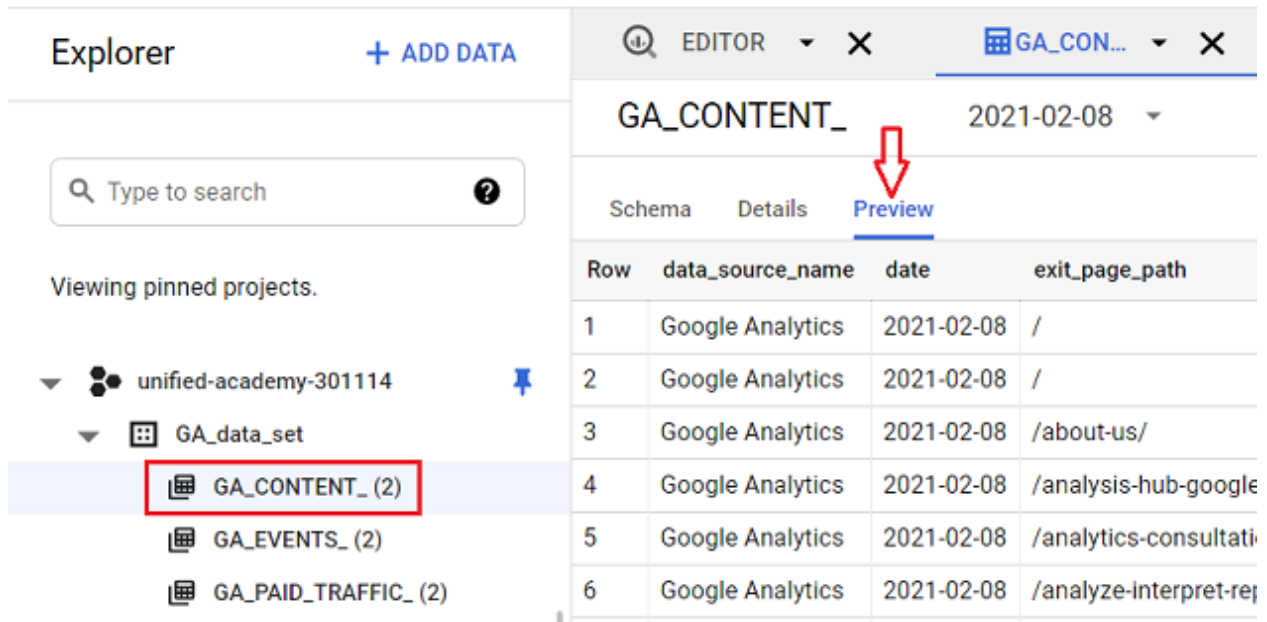
Step-45: Navigate to the data set named 'GA_data_set' (which we created earlier).

This data set lists all the data tables automatically created by supermetrics:



Step-46: Click on the data tables one by one to see what data it contains.

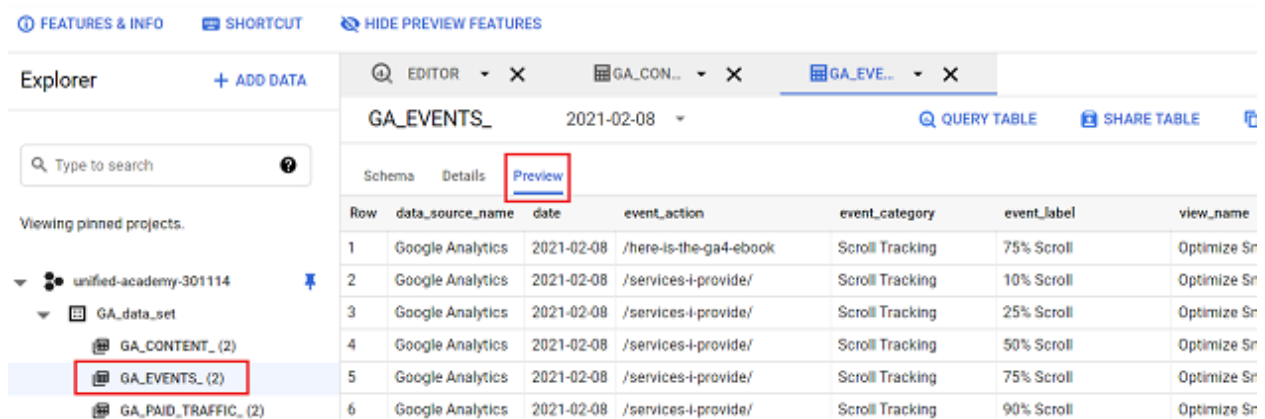
For example, **GA_CONTENT_** data table contains the GA content data:



The screenshot shows the Data Explorer interface. On the left, the Explorer pane shows a project named 'unified-academy-301114' with a sub-project 'GA_data_set'. Under 'GA_data_set', three tables are listed: 'GA_CONTENT_(2)', 'GA_EVENTS_(2)', and 'GA_PAID_TRAFFIC_(2)'. The 'GA_CONTENT_(2)' table is highlighted with a red box. On the right, the 'EDITOR' pane shows the 'GA_CONTENT_' table for the date '2021-02-08'. The 'Preview' tab is selected and highlighted with a red box. A red arrow points to the 'Preview' tab. Below the tabs is a table with the following data:

Row	data_source_name	date	exit_page_path
1	Google Analytics	2021-02-08	/
2	Google Analytics	2021-02-08	/
3	Google Analytics	2021-02-08	/about-us/
4	Google Analytics	2021-02-08	/analysis-hub-google
5	Google Analytics	2021-02-08	/analytics-consultati
6	Google Analytics	2021-02-08	/analyze-interpret-rej

The **GA_EVENTS_** data table contains the GA event data:



The screenshot shows the Data Explorer interface with the 'GA_EVENTS_' table selected. The 'Preview' tab is highlighted with a red box. The table below shows the following data:

Row	data_source_name	date	event_action	event_category	event_label	view_name
1	Google Analytics	2021-02-08	/here-is-the-ga4-ebook	Scroll Tracking	75% Scroll	Optimize Sr
2	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	10% Scroll	Optimize Sr
3	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	25% Scroll	Optimize Sr
4	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	50% Scroll	Optimize Sr
5	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	75% Scroll	Optimize Sr
6	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	90% Scroll	Optimize Sr

At this point, you can query a particular set of data by clicking on the 'Query Table' button:

FEATURES & INFO SHORTCUT HIDE PREVIEW FEATURES

Explorer + ADD DATA

GA_EVENTS_ 2021-02-08 QUERY TABLE

Schema Details **Preview**

Row	data_source_name	date	event_action	event_category	event_label	view_name
1	Google Analytics	2021-02-08	/here-is-the-ga4-ebook	Scroll Tracking	75% Scroll	Optimiz
2	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	10% Scroll	Optimiz
3	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	25% Scroll	Optimiz
4	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	50% Scroll	Optimiz
5	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	75% Scroll	Optimiz
6	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	90% Scroll	Optimiz

HIDE PREVIEW FEATURES

GA_EVE... *UNSAVE... 2

RUN SAVE SCHEDULE MORE

```

1 SELECT
2   *
3 FROM
4   `unified-academy-301114.GA_data_set.GA_EVENTS_20210208`
5   where event_action = '/services-i-provide/'
6 LIMIT
7   1000

```

Query results SAVE RESULTS EXPLORE DATA

Query complete (0.6 sec elapsed, 495.1 KB processed)

Job information **Results** JSON Execution details

Row	data_source_name	date	event_action	event_category	event_label	view_name
1	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	10% Scroll	Optimiz
2	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	25% Scroll	Optimiz
3	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	50% Scroll	Optimiz
4	Google Analytics	2021-02-08	/services-i-provide/	Scroll Tracking	75% Scroll	Optimiz

That's how you can send Google Analytics data to BigQuery without using Google Analytics 360.

How to connect Google Analytics 4 with BigQuery?

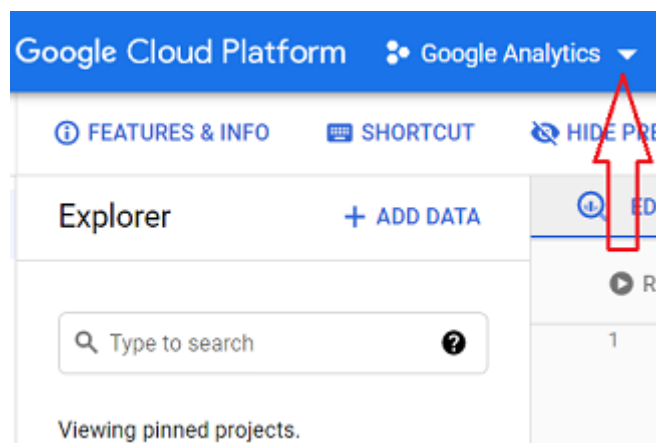
Now let's dive into this step-by-step guide to connecting your Google Analytics 4 property to BigQuery.

Follow the steps below to connect Google Analytics 4 with BigQuery and then send the GA data to it:

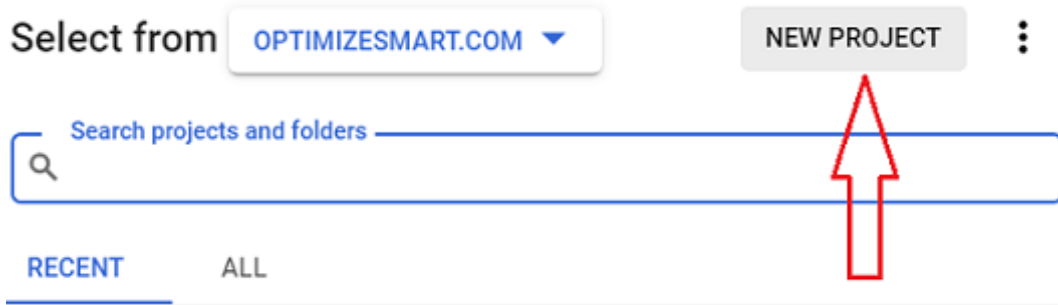
Step-1: Navigate to your BigQuery account:

<https://console.cloud.google.com/bigquery>

Step-2: At the top of your screen click on the drop-down menu:

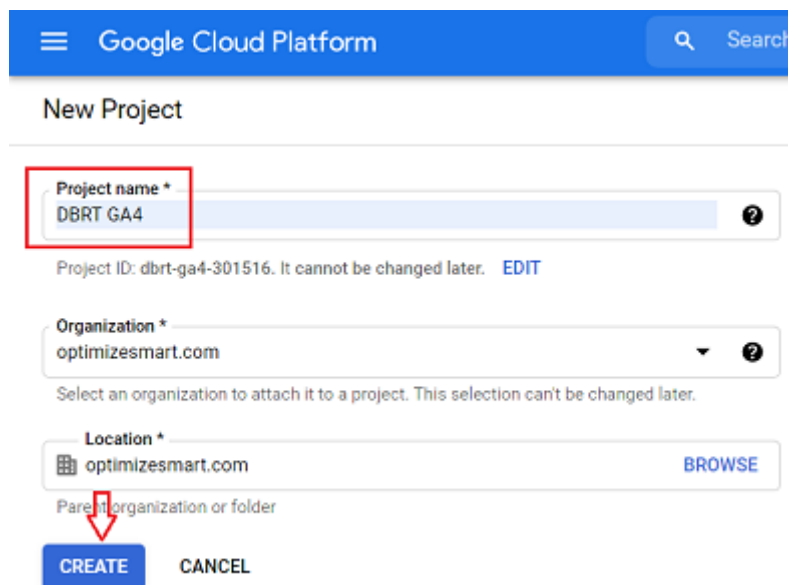


Step-3: Click on the 'New Project' button:

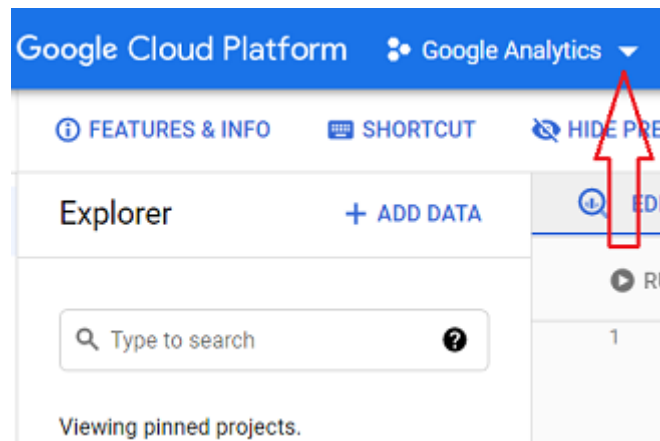


We are going to use this new project for collecting and querying Google Analytics 4 data into BigQuery.

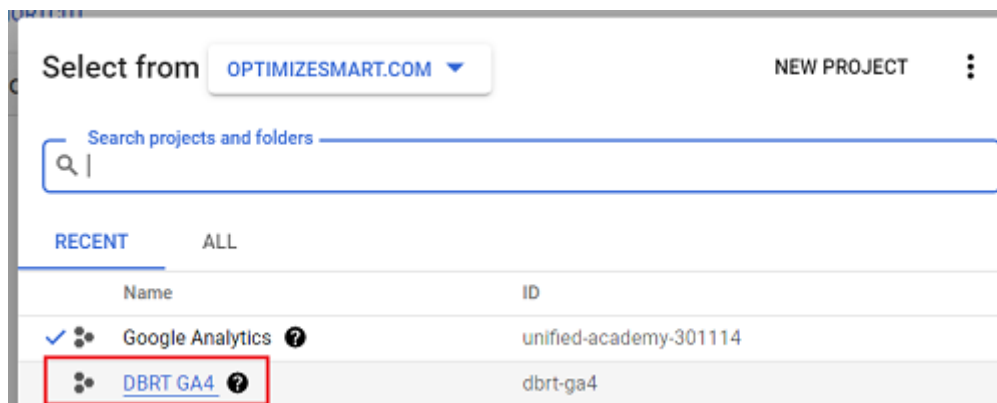
Step-4: Name your new project and then click on the 'Create' button:



Step-5: At the top of your screen click on the drop-down menu:

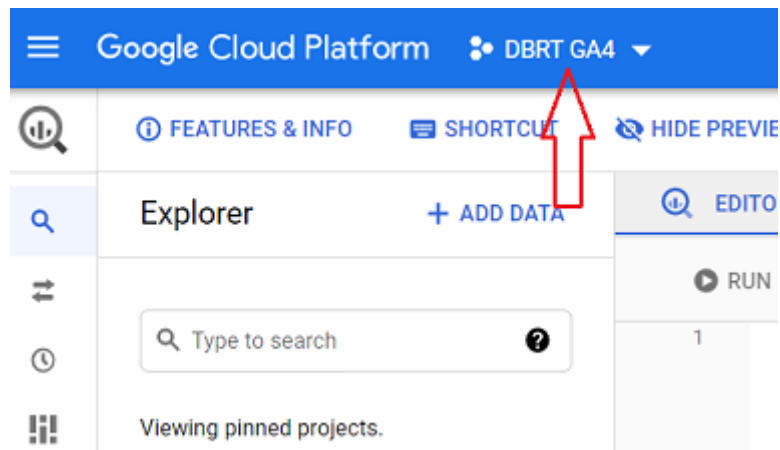


Step-6: Click on the name of the project you want to switch to (in our case 'DBRT GA4'):

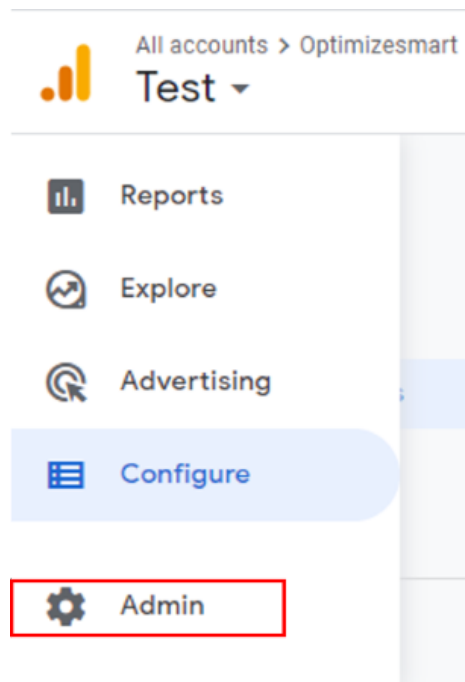


Congratulations! You are now in the 'DBRT GA4' project.

You will know that you are in the right project because the project name will appear at the top of your screen:






Step-7: Log in to your Google Analytics 4 property and click on 'Admin' under the left-hand side reporting menu.

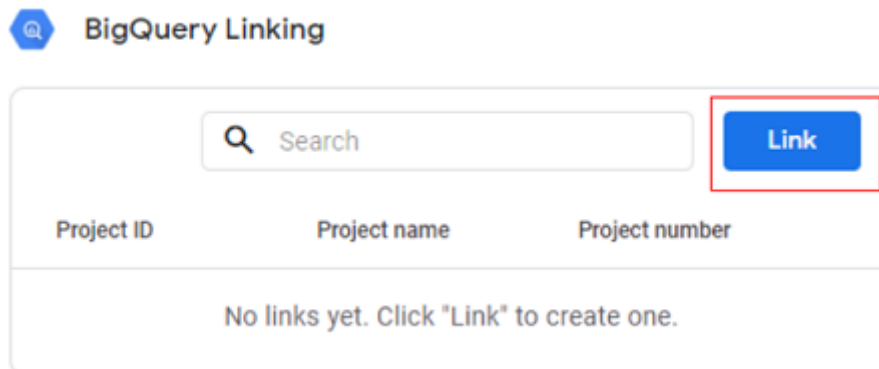


Step-8: Click on 'BigQuery Linking' under 'Product Linking':

PRODUCT LINKING

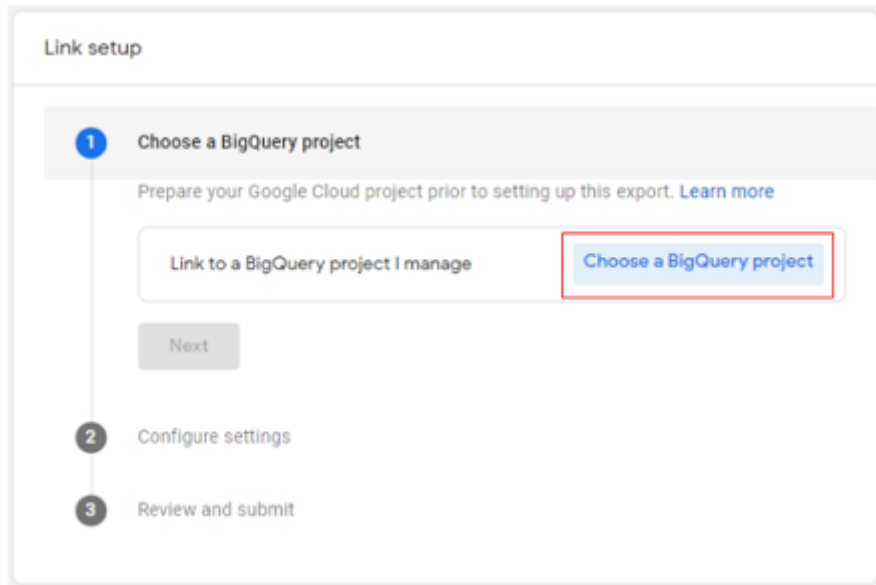
 Google Ads Linking Ad Manager Linking BigQuery Linking

Step-9: Click on the 'Link' button:

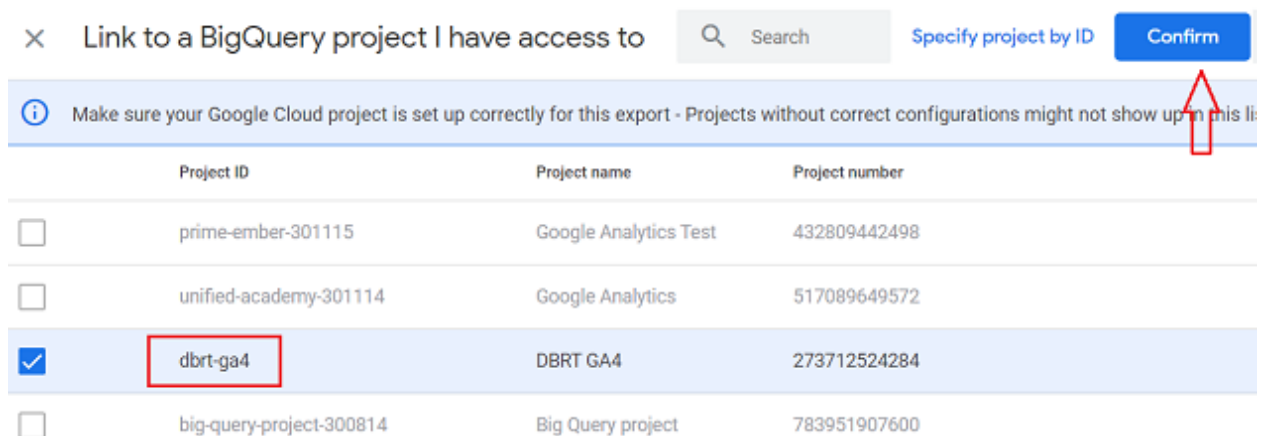


The image shows the BigQuery Linking interface. At the top left is the BigQuery icon and the text "BigQuery Linking". Below this is a search bar with a magnifying glass icon and the word "Search". To the right of the search bar is a blue button with the word "Link" in white text, which is highlighted with a red rectangular border. Below the search bar and button is a table with three columns: "Project ID", "Project name", and "Project number". The table is currently empty, and below it is a message that says "No links yet. Click 'Link' to create one."

Step-10: Click on 'Choose a BigQuery project':



Step-11: Select the BigQuery project where you want to send your GA4 data and then click on the 'Confirm' button. In our case that project is 'DBRT GA4':




Step-12: Select your data location and then click on the 'Next' button.


Data location is the cloud region where your data is stored.


Link setup


1 Choose a BigQuery project

Prepare your Google Cloud project prior to setting up this export. [Learn more](#)

Link to a BigQuery project I manage 

 **DBRT GA4**
dbrt-ga4


Data location 

United States (us) 


Next

Step-13: ‘Edit’ your data stream(s) if required. Otherwise, move on to the next step. By default, all of the data streams are selected.

You have the option to select a specific data stream for which you will be exporting the data to BigQuery. Just click on ‘Edit’ if you want to edit your data streams:

 Choose a BigQuery project

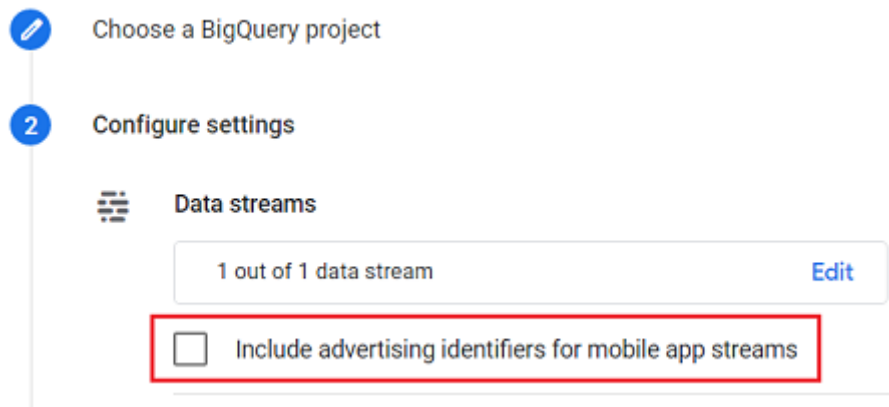
2 Configure settings

 **Data streams**

1 out of 1 data stream [Edit](#)


Include advertising identifiers for mobile app streams

Step-14: Click on the checkbox “*Include advertising identifiers for mobile app streams*” if you have a mobile app and you want to export mobile advertiser identifiers. Otherwise, move on to the next step.



1 Choose a BigQuery project

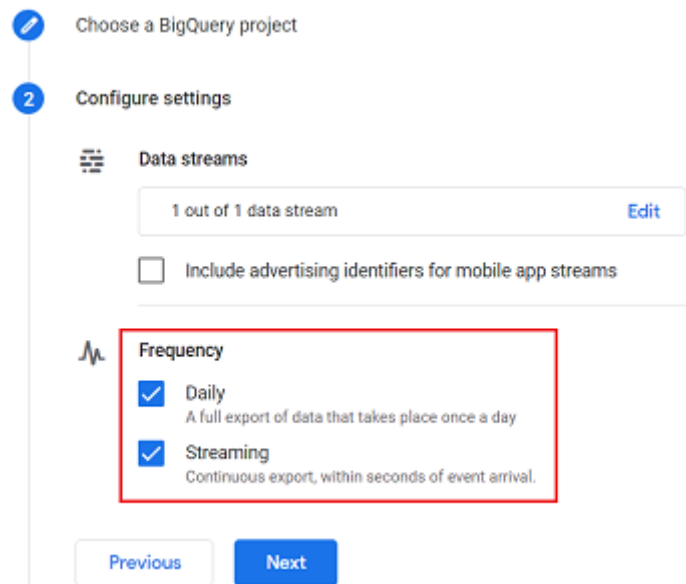
2 **Configure settings**

 **Data streams**

1 out of 1 data stream [Edit](#)


Include advertising identifiers for mobile app streams

Step-15: Select the frequency of your data import to BigQuery by selecting both ‘Daily’ and ‘Streaming’ settings and then click on the ‘Next’ button:




1 Choose a BigQuery project

2 **Configure settings**

 **Data streams**

1 out of 1 data stream [Edit](#)

Include advertising identifiers for mobile app streams

 **Frequency**

Daily
A full export of data that takes place once a day


Streaming
Continuous export, within seconds of event arrival.

[Previous](#) [Next](#)

You should now see a screen like the one below:

3 Review and submit


Link to a BigQuery project I manage

 **DBRT GA4**
dbrt-ga4

Data location (?)


United States (us) ▼

Data configurations

 **Data streams**

1 out of 1 data stream [View](#)

Include advertising identifiers for mobile app streams

 **Frequency**

Daily
A full export of data that takes place once a day

Streaming
Continuous export, within seconds of event arrival.

[Previous](#) [Submit](#)

Step-16: Click on the ‘Submit’ button. You should now see a screen like the one below:

Link confirmation

DBRT GA4 :
dbrt-ga4

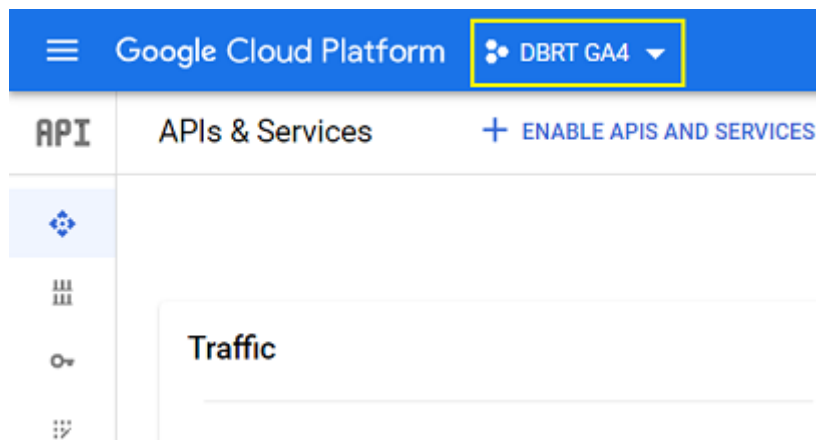
LINK CREATED

Congratulations!

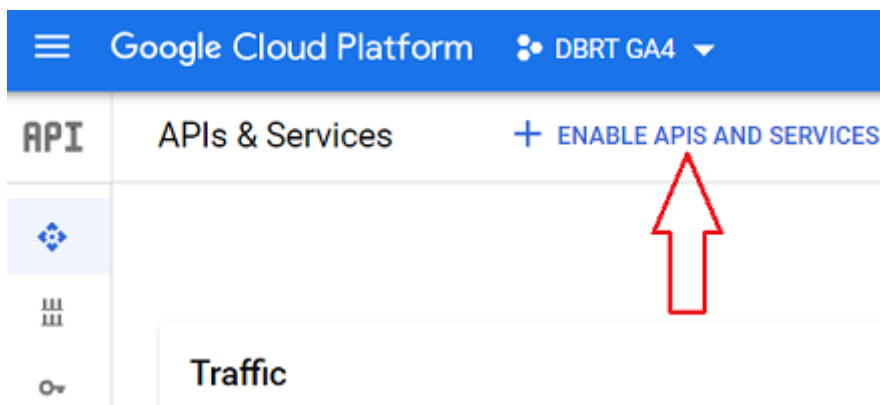
Your GA4 account is now successfully linked to your Big Query project.

Step-17: Navigate to <https://console.cloud.google.com/apis/dashboard>

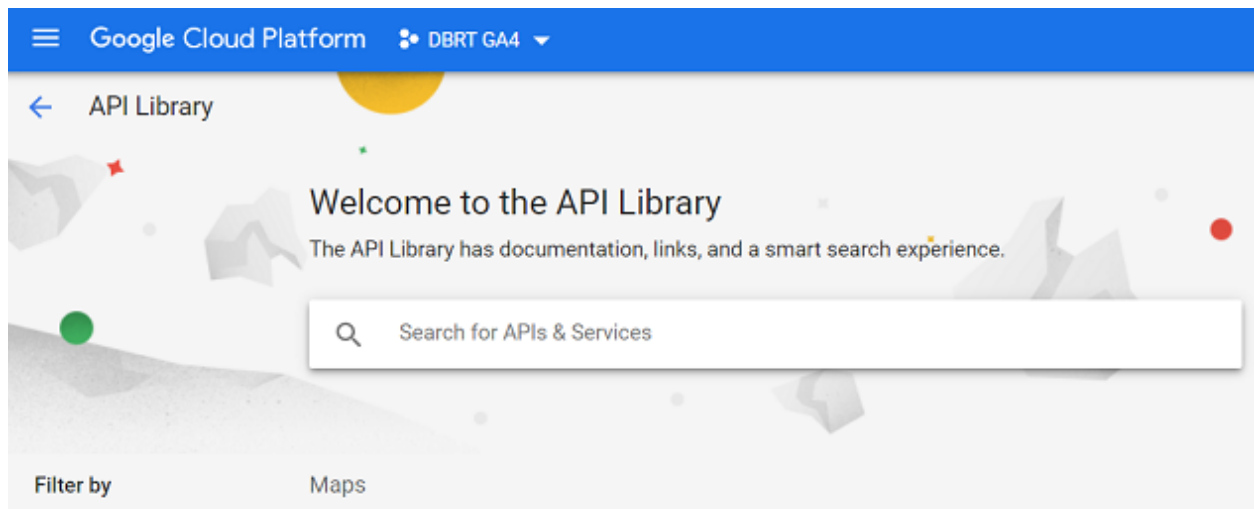
Step-18: Make sure your BigQuery project for GA4 is selected:



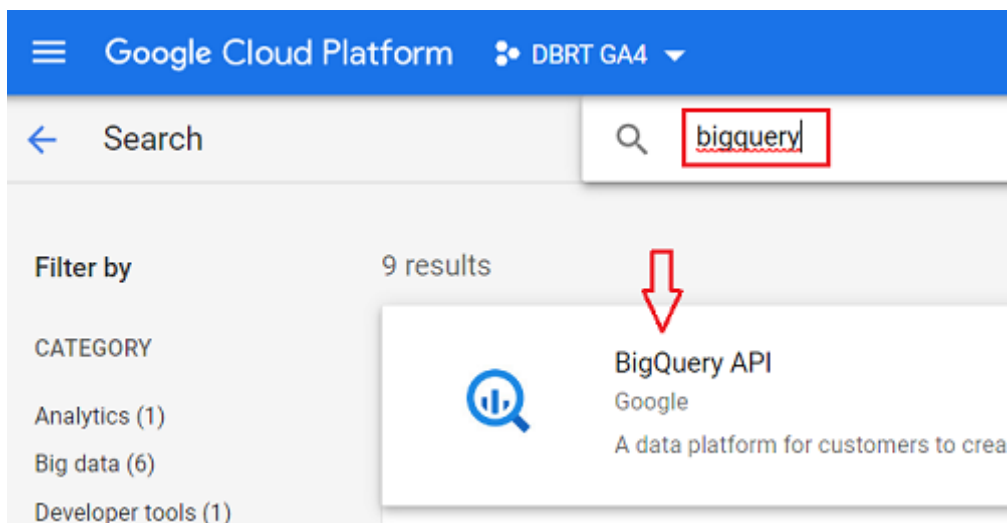
Step-19: Click on the '+ENABLE APIS AND SERVICES' button:



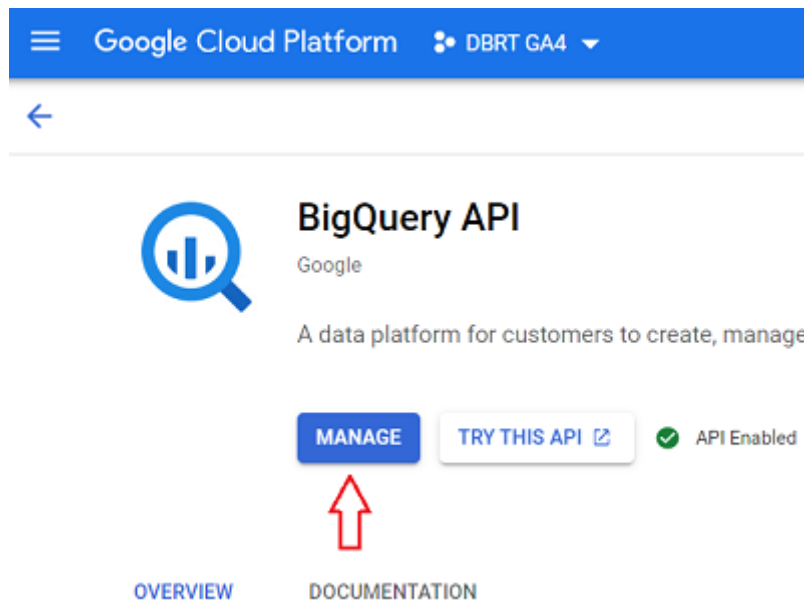
You should now see a screen like the one below:



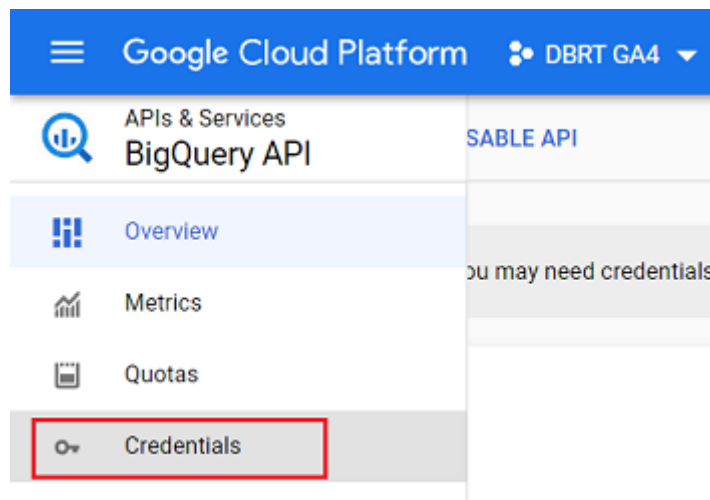
Step-20: Search for “Big Query” and then click on the ‘Big Query API’ button:



Step-21: Click on the ‘Manage’ button:

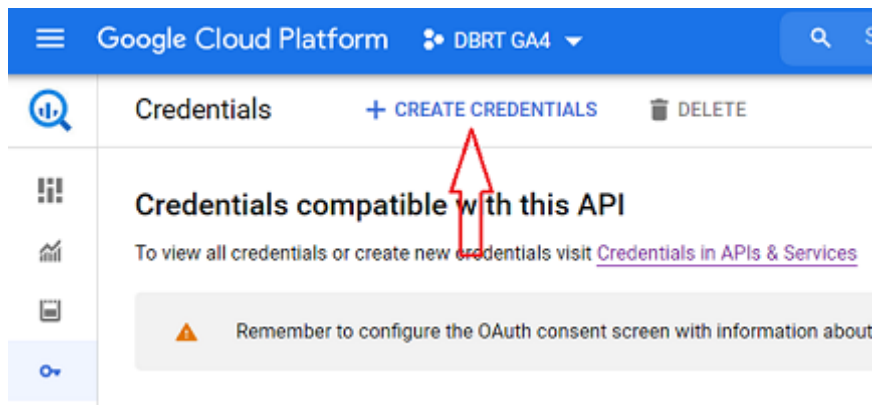


Step-22: Click on the 'Credentials' link from the left-hand side navigation menu:

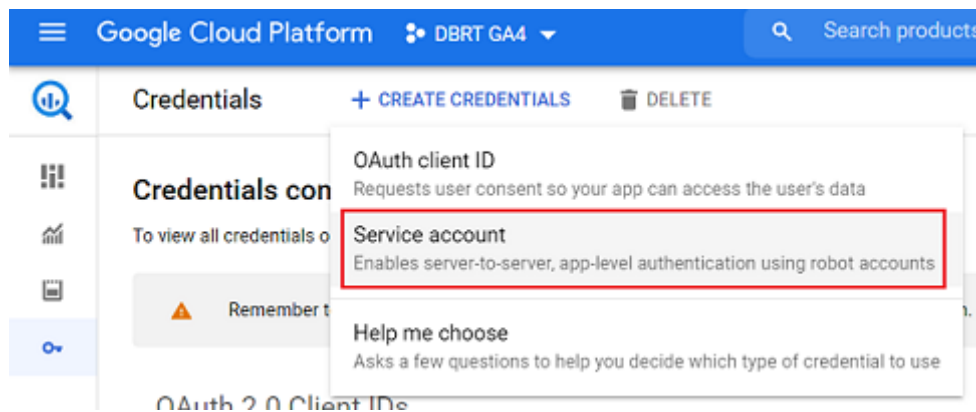


Step-23: You would now need to add a firebase service account.

This account would be used to export Google Analytics 4 data to BigQuery. To do that click on the '+create credentials' button:



Step-24: Click on the 'Service account' link to create a new service account:



You should now see a screen like the one below:

Create service account

- 1 Service account details**
 - Service account name ⓘ
Display name for this service account
 - Service account ID ✕ ↺
 - Service account description
Describe what this service account will do
 -
- 2 Grant this service account access to project (optional)**
- 3 Grant users access to this service account (optional)**

Step-25: Enter **firebase-measurement@system.gserviceaccount.com** as service account name:

Create service account

1 Service account details

Service account name

Display name for this service account

Service account ID

Service account description

Describe what this service account will do

CREATE

2 Grant this service account access to project (optional)

3 Grant users access to this service account (optional)

DONE CANCEL


Step-26: Click on the 'Create' button:

Create service account

1 Service account details

Service account name
firebase-measurement@system.gserviceaccount.com 

Display name for this service account

Service account ID
firebase-measurement-system-gs @ga3-lateral-boulder-301812.ia  

Service account description

Describe what this service account will do



CREATE

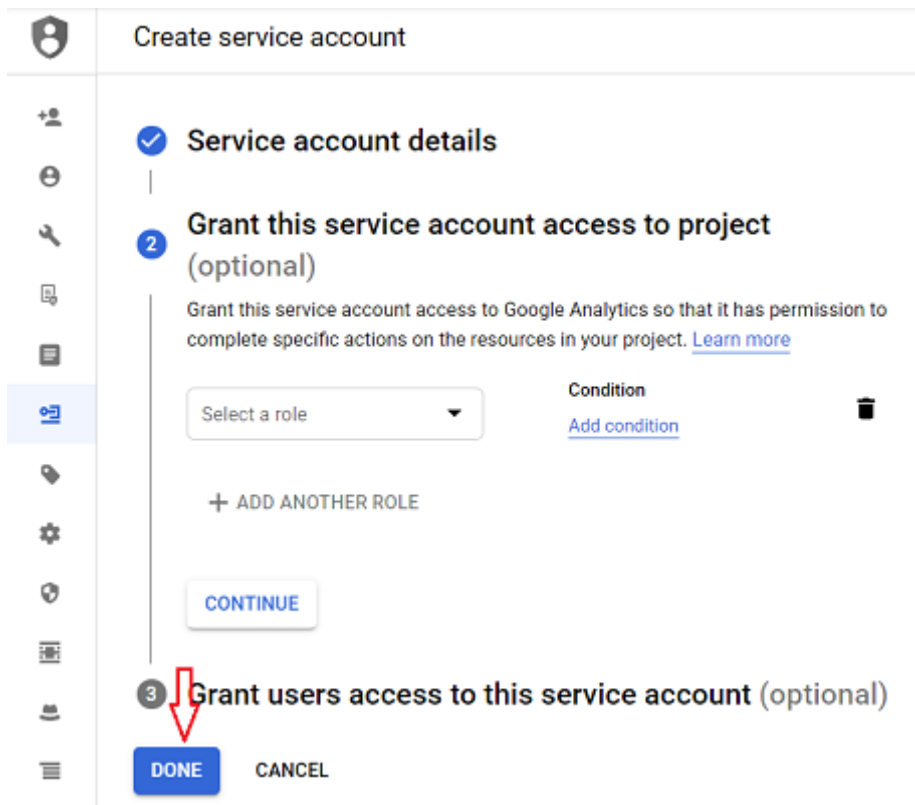
2 Grant this service account access to project (optional)

3 Grant users access to this service account (optional)

DONE

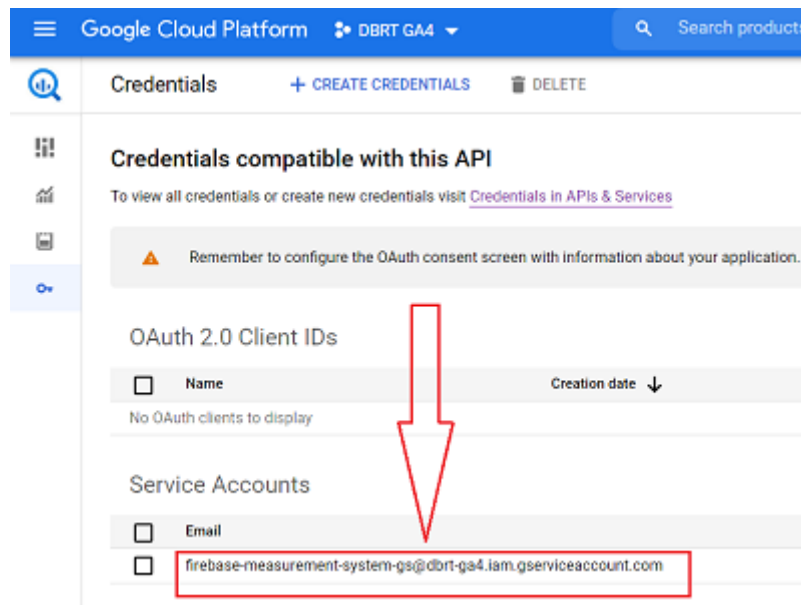
CANCEL

You should now see a screen like the one below:



Step-27: Click on the 'DONE' button.

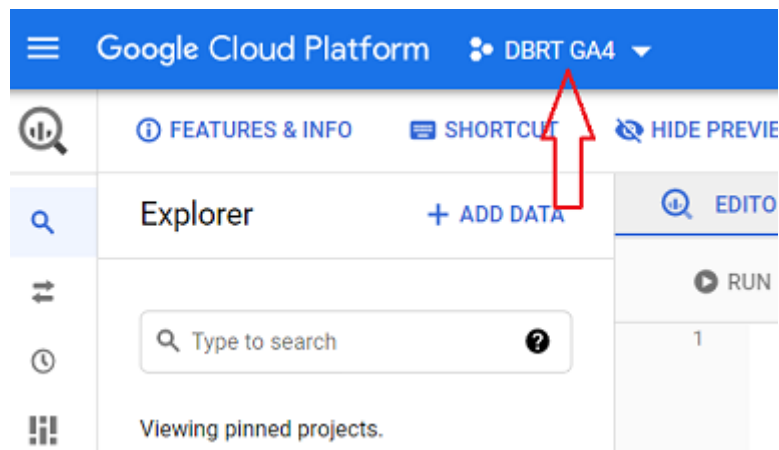
You should now see your new service account listed like the one below:



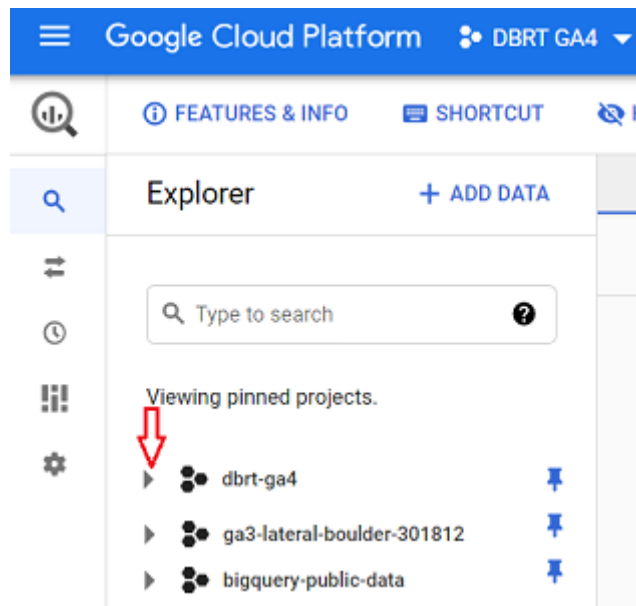
Step-28: Wait for a full 24 hours.

It usually takes around 24 hrs for your GA4 data to be available in your BigQuery project.

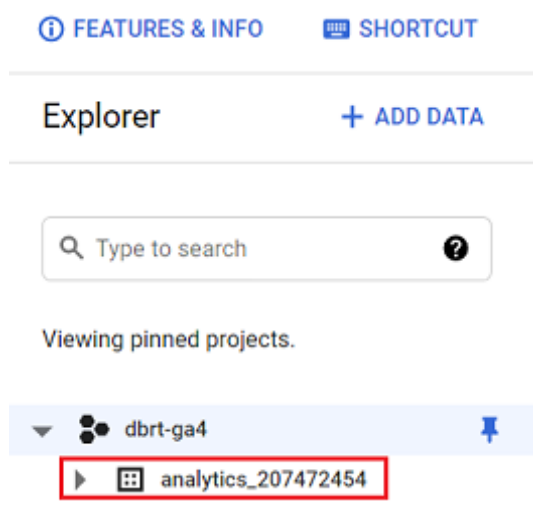
Step-29: Navigate back to your BigQuery account and make sure that your project used for collecting GA4 data is selected:



Step-30: Scroll down and then click on the project ID of the project which collects GA4 data:



You should now be able to see a data set named “*analytics_<property_id>*”:



For each Google Analytics 4 property that is linked to BigQuery, a single dataset named “analytics_<property_id>” is added to your BigQuery project.

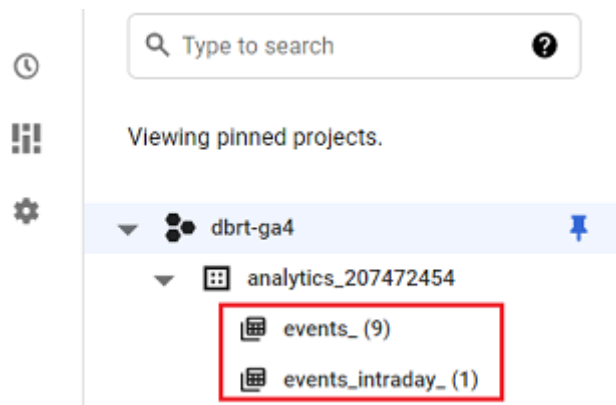
Property ID refers to your Analytics Property ID, which you can find in the property settings for your GA4 property.

In my case, the property ID is 207472454

That’s why the name of my data set is ‘analytics_207472454’

This data set contains the following two data tables which contain your GA4 data:

1. events_(<number of days>)
2. events_intraday_<current date>



You are doing Google Analytics all wrong. Here is why...

I have dealt with hundreds of Google Analytics accounts in my career.

I have seen a lot of issues from incorrect tracking code, selecting the wrong KPIs to analyzing data without using custom reports or advanced segments.

But do you know the biggest issue of all in Google analytics?....

It is the “misinterpretation of analytics data”.

Many marketers make the mistake of crediting conversions to the wrong marketing channel.

And they seem to be making this mistake over and over again.

They give the credit for conversions to the last touchpoint (campaign, ad, search term...).

They can't help themselves because they believe that the Google Analytics reports are 'what you see is what you get'.

But they are actually 'what you interpret is what you get'.

This has resulted in marketers making wrong business decisions and losing money.

All the data you see in Google Analytics reports today lies to you unless you know exactly how to interpret it correctly.

For example, let's talk about direct traffic.

All untagged or incorrectly tagged marketing campaigns from display ads to emails could be reported as direct traffic by Google.

Whenever a referrer is not passed, the traffic is reported as direct traffic by Google.

Mobile applications don't send a referrer. Word/PDF documents don't send a referrer.

'302 redirects' sometimes cause the referrer to be dropped. Sometimes browsers don't pass the referrer.

During an HTTP to HTTPS redirect (or vice versa) the referrer is not passed because of security reasons.

All such traffic is reported as direct traffic by Google.

So on the surface, it may look like that most people are visiting your website directly but this is not usually the case.

But this analysis does not end here, because you are still not looking at the complete picture.

People do not always access your website directly and then make a purchase straight away.

They are generally exposed to multiple marketing channels (display ads, social media, paid search, organic search, referral websites, email etc) before they access your website directly.

Before they make a purchase.

So if you are unaware of the role played by prior marketing channels, you will credit conversions to the wrong marketing channels.

Like in the present case to direct traffic.

To get this type of understanding you need to understand and implement web analytics.

But you learn data analysis and data interpretation from web analytics and not from Google Analytics.

The direction in which your analysis will move will determine the direction in which your marketing campaigns will move.

You get that direction from 'web analytics' and not from 'Google Analytics'.

Web/Digital analytics is not about Google Analytics (GA) or Google Tag Manager (GTM). It is about analyzing and interpreting data, setting up goals, strategies and KPIs.

It's about creating a strategic roadmap for your business.

That's why the knowledge of web/digital analytics is so important.

So, what I have done is put together some completely free training for you.

This training will teach you what digital analytics really is and how I have been able to leverage it to generate floods of new sales and customers.

I will also show you how you can copy what I have done to get similar results.

You can sign up for the free training here:

[Reserve My Seat Now](#)

I hope you find it helpful.

All the best,

Himanshu