

Integrating Google Analytics with BigQuery

Setup guide for Lemon AI

This guide walks you through configuring Google Analytics and Google Cloud, so that Lemon AI can access your data and optimize your Google Ads campaigns. You can complete the setup yourself, or grant the Lemon AI team **Editor** access so we can assist you.

Prerequisites. Before you begin, make sure you have:

- A Google Analytics 4 (GA4) property with at least one active data stream.
- A Google Cloud account with billing enabled.
- Admin access to your [Google Analytics account](#) and [Google Cloud Console](#).

What you'll do. This guide covers three main tasks:

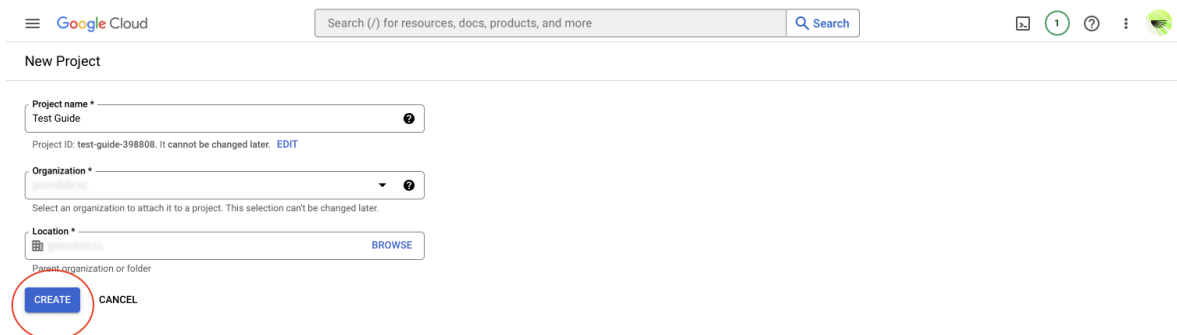
- Create a Google Cloud project and enable the BigQuery API.
- Link your Google Analytics property to BigQuery.
- Configure a service account, storage bucket, and access permissions in Google Cloud.

Step 1: Create a project in Google Cloud

In this step, you create a Google Cloud project, which serves as the container for all BigQuery and Cloud Storage resources you set up later in this guide.

Create the project

1. Go to the [Google Cloud Console](#).
2. In the top navigation bar, open the **project picker**, then click **New Project**
3. Enter a project name and click **Create**. The project appears in your project list.



Google Cloud

Search (/) for resources, docs, products, and more

Search

1

New Project

Project name *

Test Guide

Project ID: test-guide-398808. It cannot be changed later. [EDIT](#)

Organization *

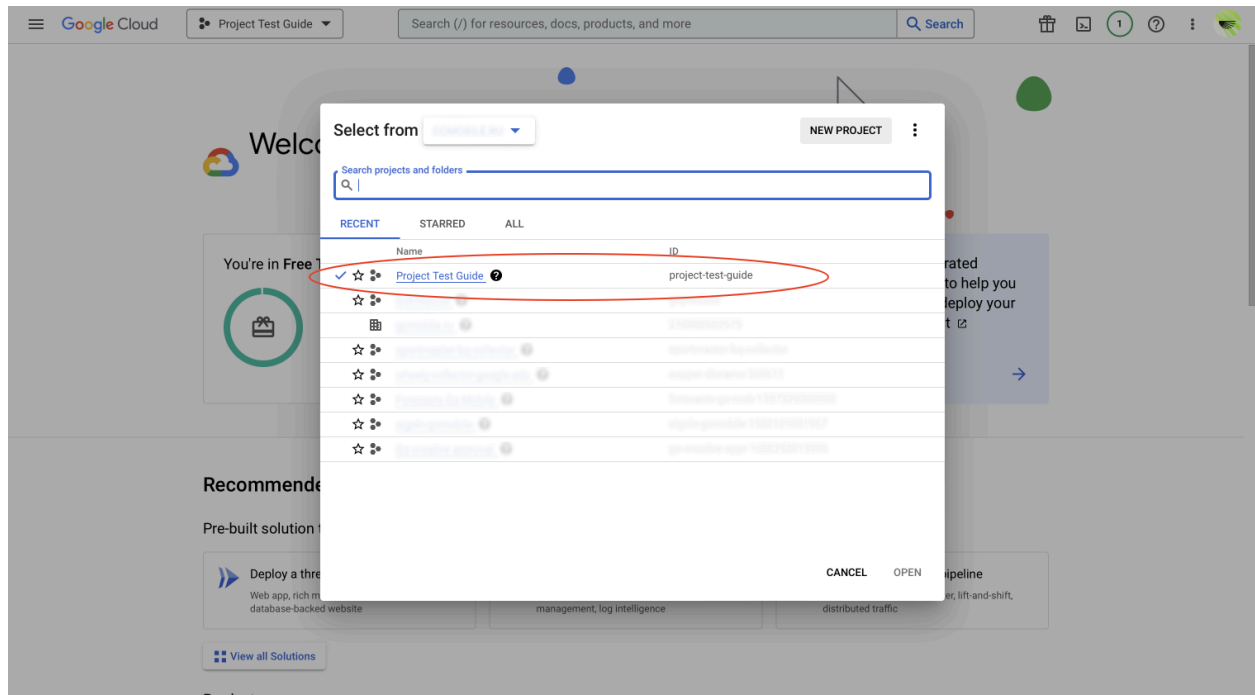
Select an organization to attach it to a project. This selection can't be changed later.

Location *

[BROWSE](#)

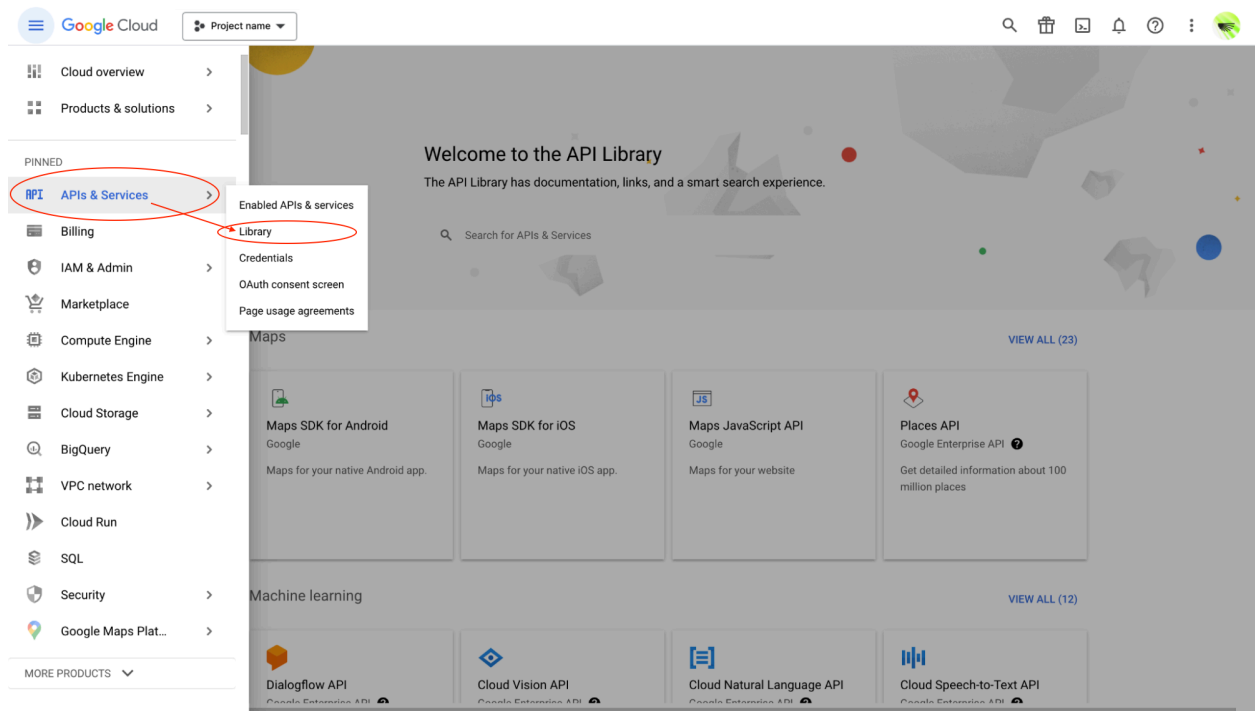
Parent organization or folder

CREATE CANCEL



Enable the BigQuery API

1. In the left navigation menu, go to **APIs & Services > Library**.



2. Search for **BigQuery API** and select it from the results.
3. Confirm that the status shows **API Enabled**. If not, click **Enable**.

Google Cloud Project name

Product details

BigQuery API

Google Enterprise API

A data platform for customers to create, manage, share and query data.

MANAGE TRY THIS API **API Enabled**

OVERVIEW DOCUMENTATION RELATED PRODUCTS

Overview
A data platform for customers to create, manage, share and query data.

Additional details
Type: [SaaS & APIs](#)
Last product update: 7/22/22
Category: [Big data](#), [Google Enterprise APIs](#)
Service name: bigquery.googleapis.com

Step 2: Link Google Analytics to BigQuery

In this step, you connect your Google Analytics property to the Google Cloud project you created in Step 1. This allows Analytics to export event data to BigQuery.

1. In your [Google Analytics account](#), click **Admin** (the gear icon in the bottom-left corner).

Analytics All accounts > Your Project Name
Your Project Name — GA4

Try searching "how to set up Analytics"

Admin

These settings apply to all users of this account and property. For settings that apply only to you, go to [My preferences](#) in the left navigation.

ACCOUNT SETTINGS

Account
These settings affect your Analytics account [What's an account?](#)

- Account details
- Account access management
- Account change history
- Account data API quota history
- Bin

PROPERTY SETTINGS

Property
These settings affect your property [What's a property?](#)

- Property details
- Property access management
- Property change history
- Property data API quota history
- Scheduled emails
- Analytics Intelligence Search History

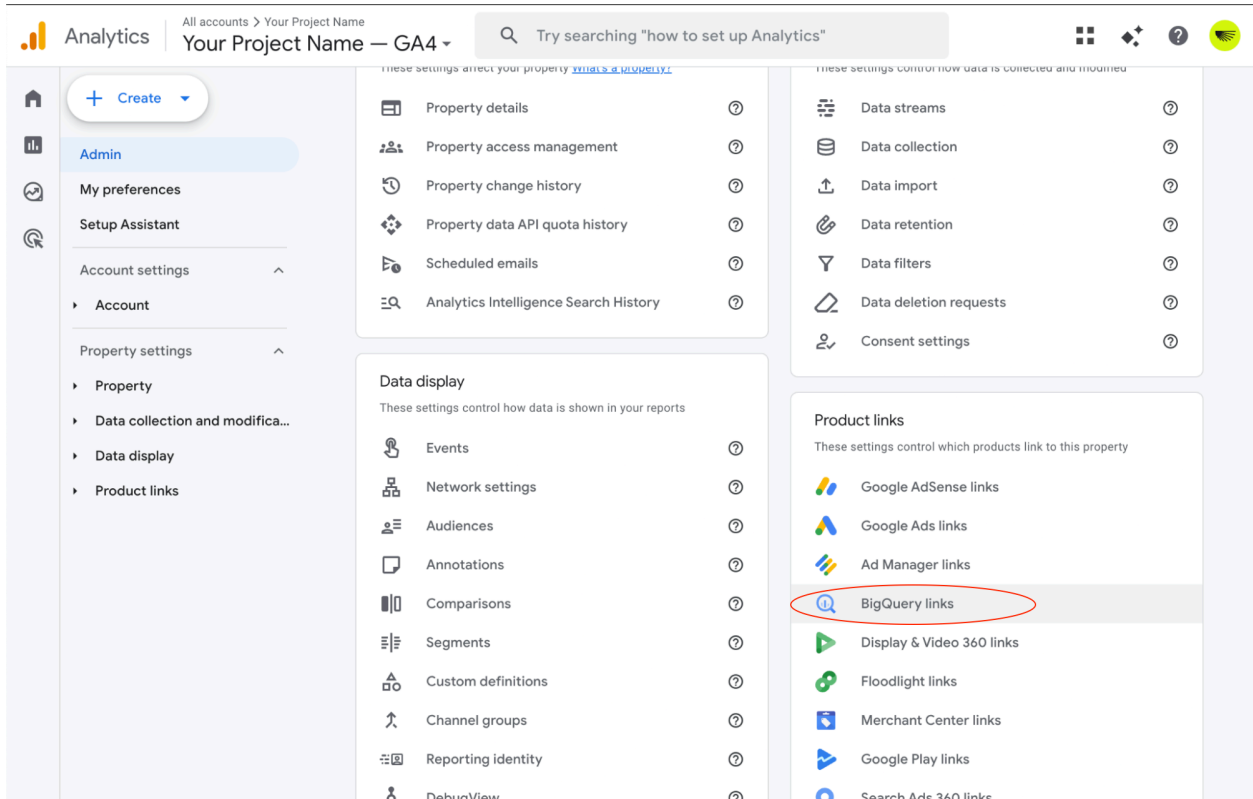
Data collection and modification
These settings control how data is collected and modified

- Data streams
- Data collection
- Data import
- Data retention
- Data filters
- Data deletion requests
- Consent settings

Data display
These settings control how data is shown in your reports

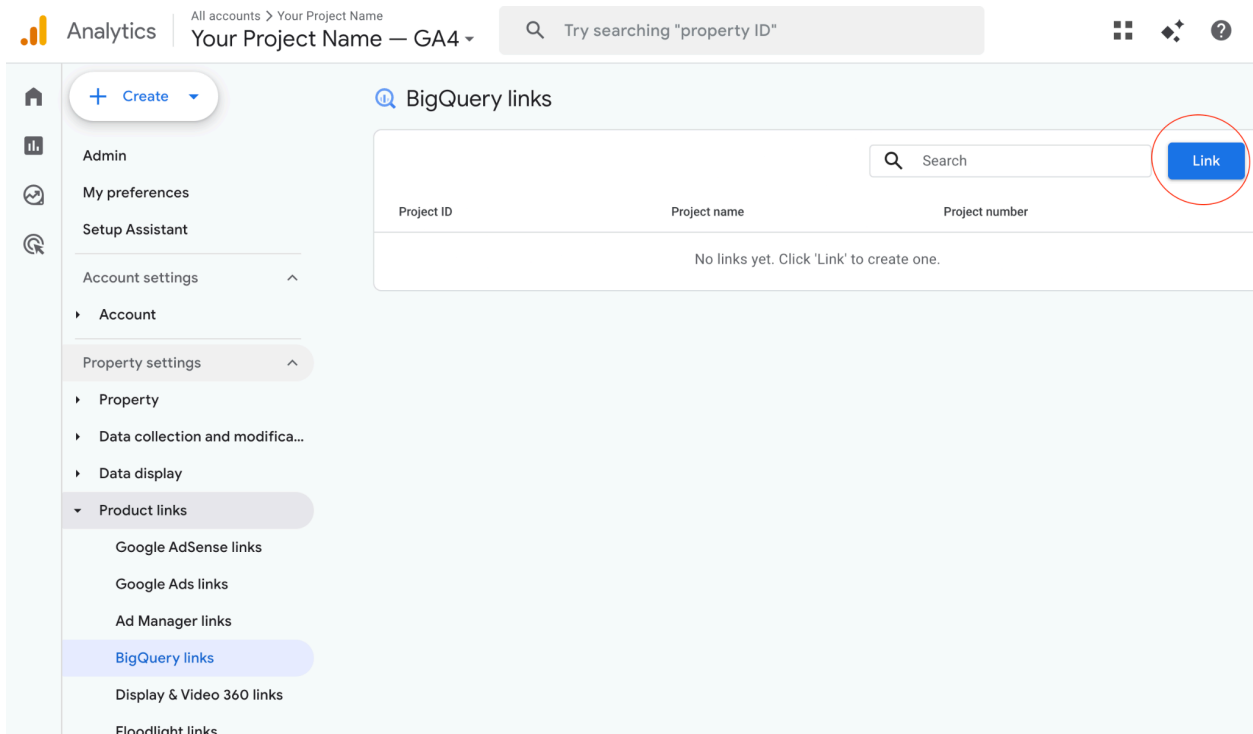
Admin (circled in red)

2. In the **Property** column, under **Product Links**, click **BigQuery Links**.



The screenshot shows the Google Analytics Admin interface. On the left sidebar, the 'Property' settings are expanded, and 'Product links' is selected. In the main content area, the 'Product links' section is visible, showing a list of product links. The 'BigQuery links' option is highlighted with a red circle.

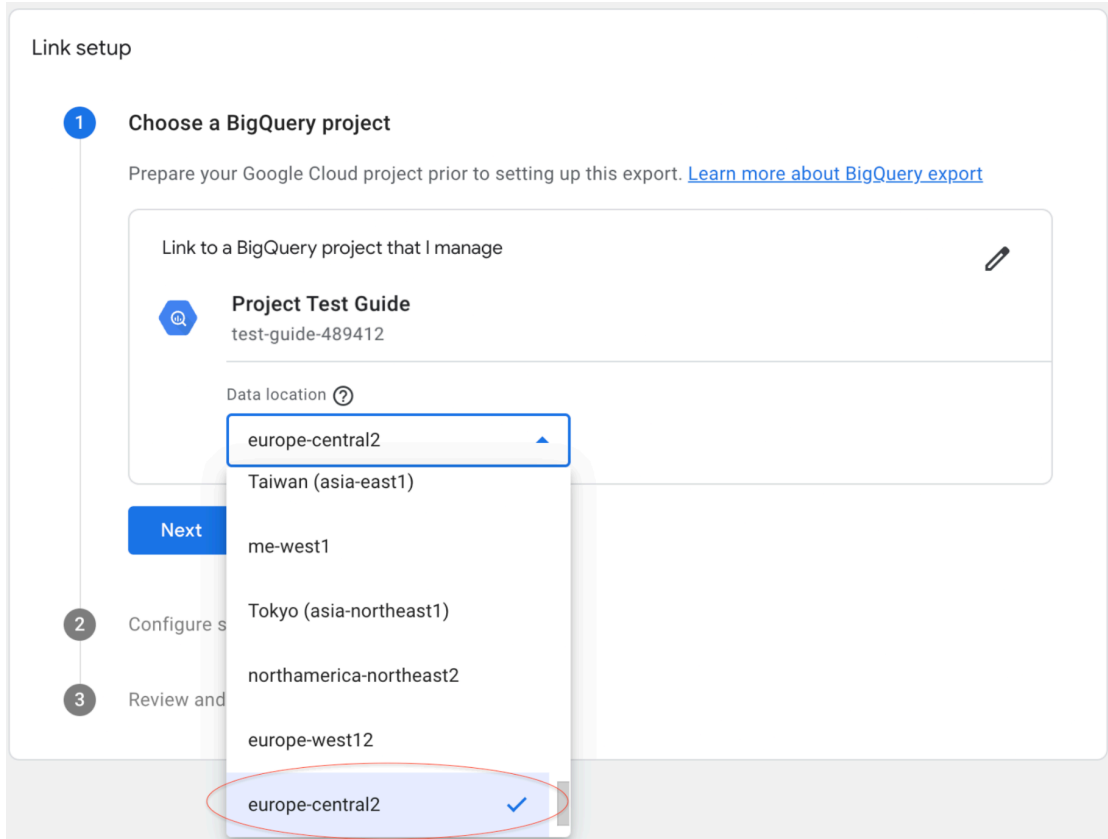
3. Click **Link**.



The screenshot shows the Google Analytics Admin interface with the 'BigQuery links' section selected. A search bar is at the top right, and a 'Link' button is highlighted with a red circle. Below the search bar, there is a table with columns for 'Project ID', 'Project name', and 'Project number'. The table is currently empty, and a message at the bottom says 'No links yet. Click 'Link' to create one.'

4. Click **Choose a BigQuery project**. A list of projects you have access to appears.

5. Search for the project you created in Step 1 and select it, then click **Confirm**.
6. Select a **data location**. You can choose any location that suits your business needs. If you don't have a preference, select **europa-central2**.



Link setup

1 Choose a BigQuery project

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

Link to a BigQuery project that I manage

 **Project Test Guide**
test-guide-489412

Data location ?

europe-central2

Taiwan (asia-east1)

me-west1

Tokyo (asia-northeast1)

northamerica-northeast2

europe-west12

europe-central2 ✓

Next

2 Configure s

3 Review and

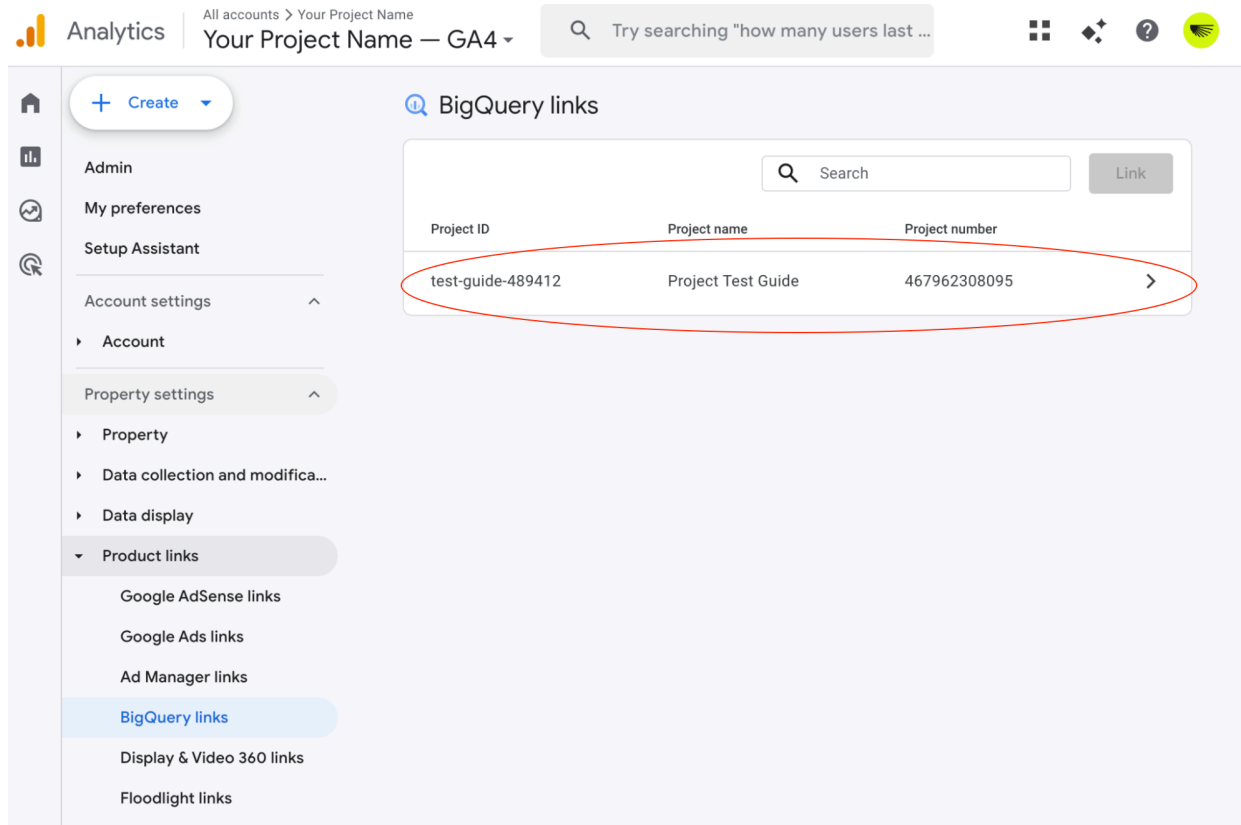
Note: Remember the location you choose here — you'll need to use the same location when you create your Cloud Storage bucket in Step 3.

7. Click **Next**.
8. Select **Configure data streams and events**, then select all data streams from the list.

Event exclusions: Lemon AI uses only events that occurred after the user's first session or install, plus the install or click event itself. In the **Excluded events** section, select any events that don't reflect user behavior in your app or website.

Advertising identifiers: If you have an Android app data stream and want to store advertising identifiers, select **Include advertising identifiers for mobile app streams**.

9. Click **Done**.
10. For **Export type**, select **Streaming**.
11. Click **Next**.
12. Review your settings and click **Submit**. The project now appears in the BigQuery Links section.



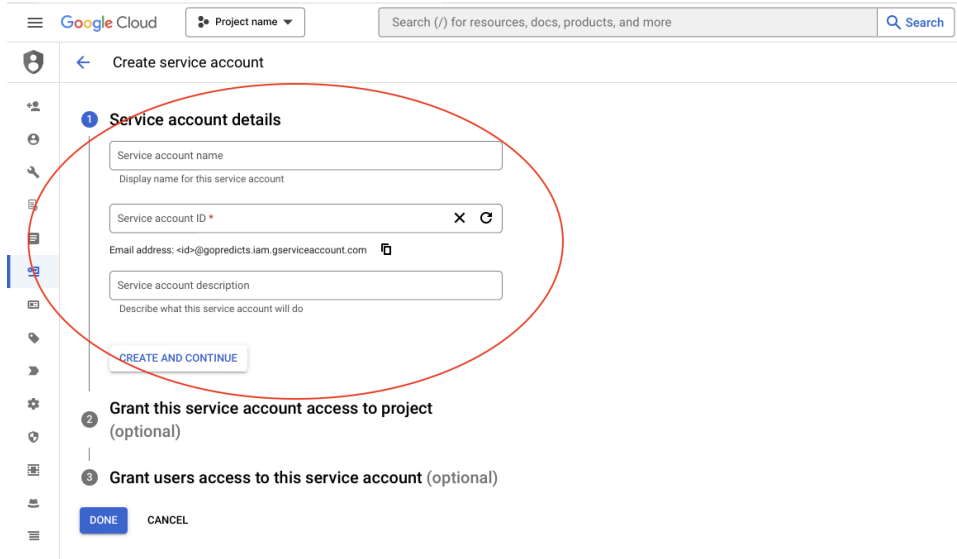
Step 3: Configure the integration in Google Cloud

In this step, you create a service account, generate credentials, set up a Cloud Storage bucket, and grant the permissions that Lemon AI needs to access your data.

3a. Create a service account

1. In the Google Cloud Console, go to **IAM & Admin > Service Accounts**.
2. Click **Create service account**.
3. Fill in the following fields:
 - **Name:** Enter your company or product name.
 - **ID:** This is auto-populated from the name. You can't change it after creation.

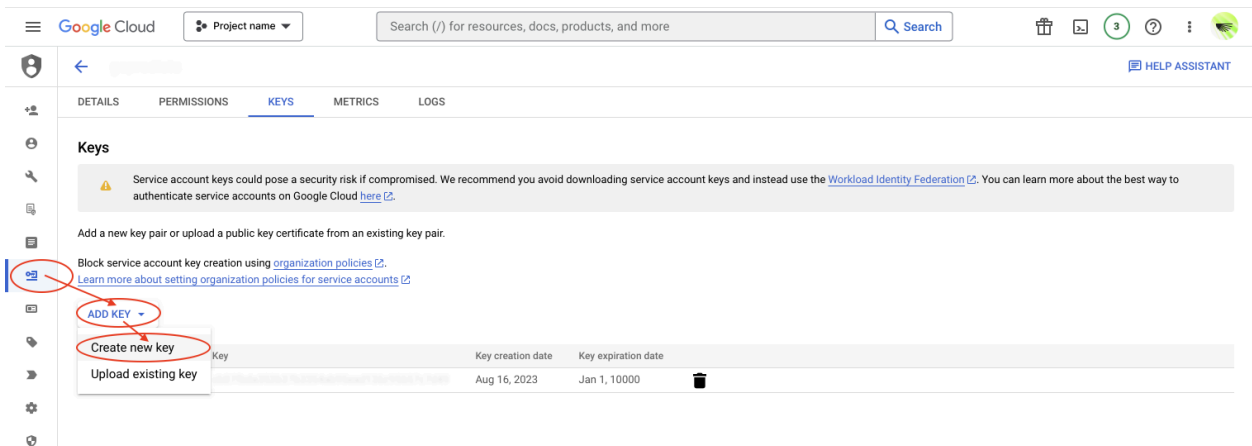
- **Description:** Describe the purpose of the account. For example: *Google Analytics exports to Lemon AI.*



4. Click **Done**. The service account appears in the list.

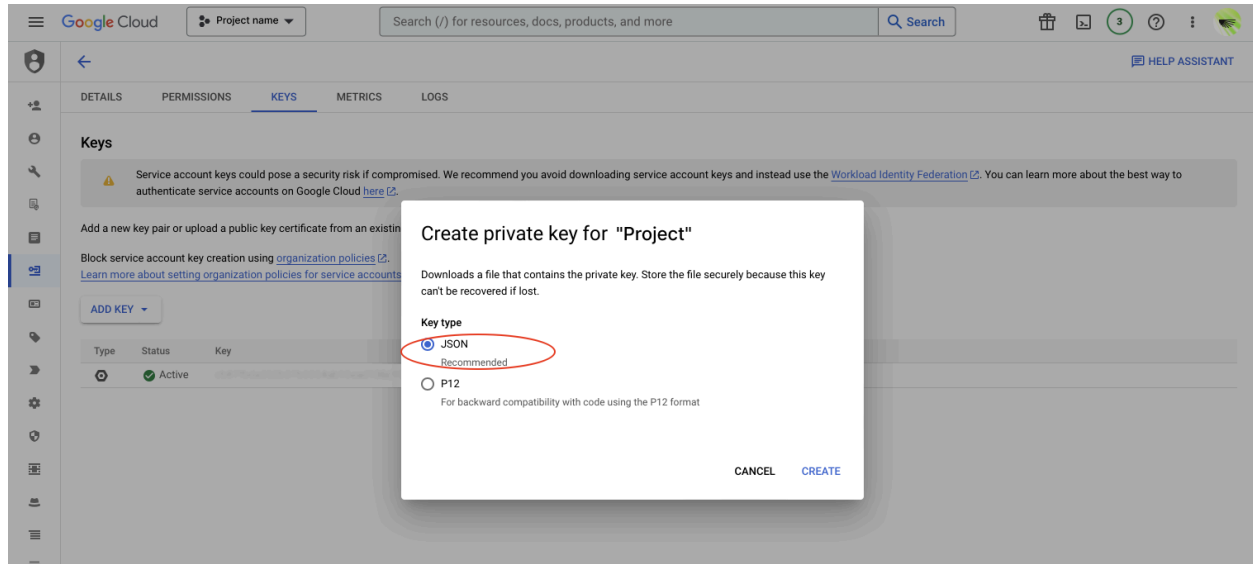
3b. Create a service account key

1. Click the service account you just created to open its details.
2. Go to the **Keys** tab.
3. Click **Add key** > **Create new key**.



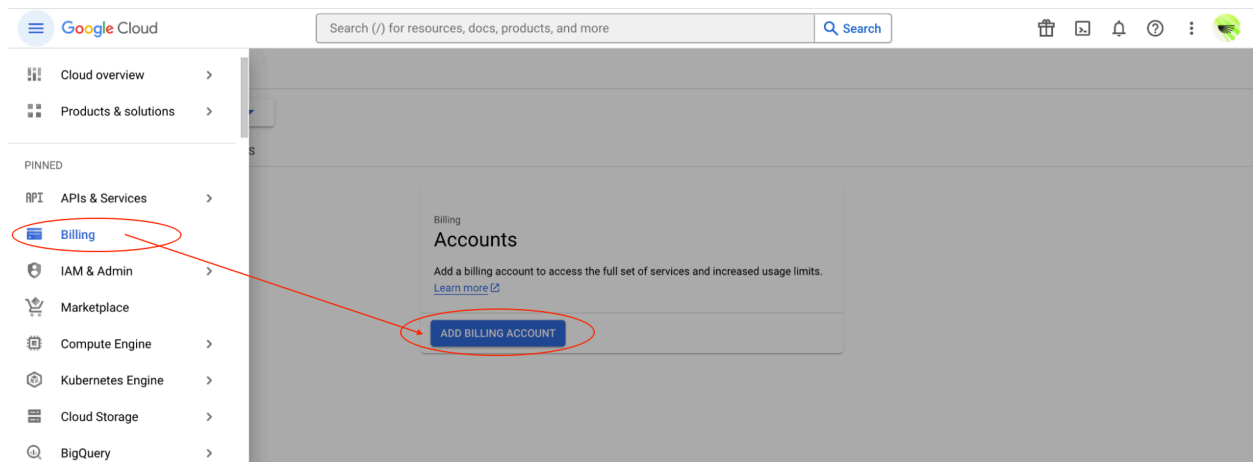
Key	Key creation date	Key expiration date
Upload existing key	Aug 16, 2023	Jan 1, 10000

4. Select **JSON** as the key type and click **Create**. The key file downloads to your computer and also appears in the key list.

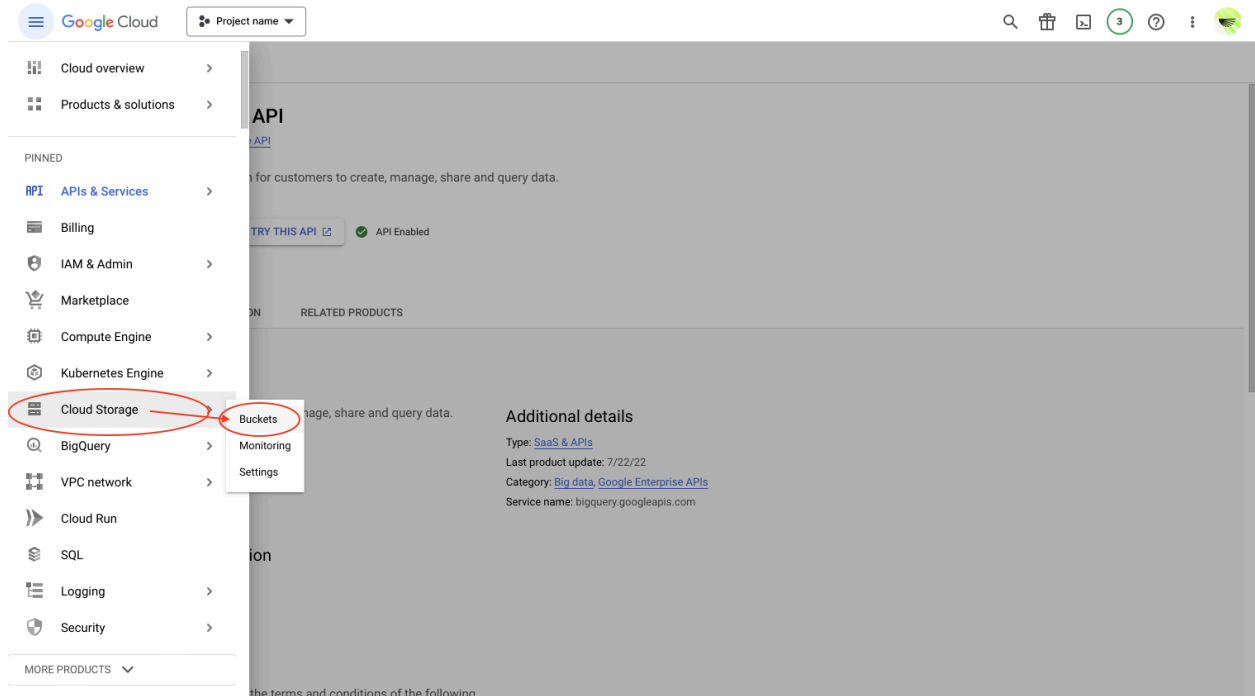


3c. Create a Cloud Storage bucket

Before you begin: Your Google Cloud account must have a billing method on file before you can create a Cloud Storage bucket. To add one, go to **Billing > Add billing account** in the left navigation menu, or follow the link in the billing section of the Console.



1. In the left navigation menu, go to **Cloud Storage > Buckets**.

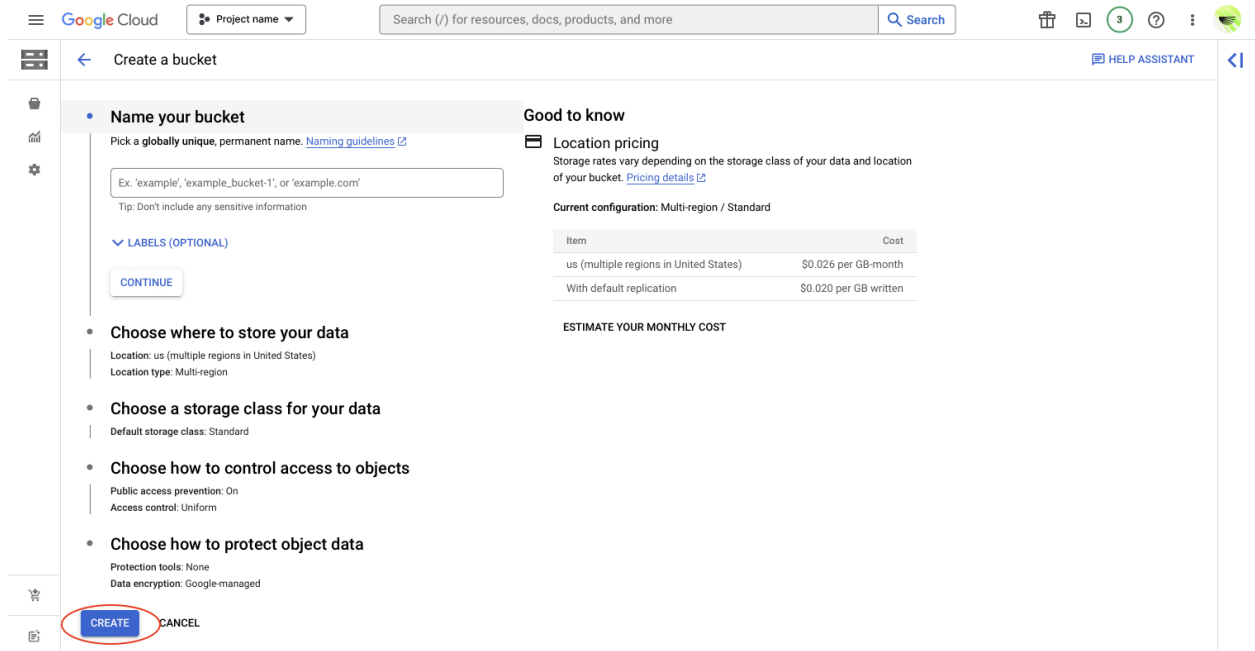


2. Click **Create**.

3. Configure the bucket:

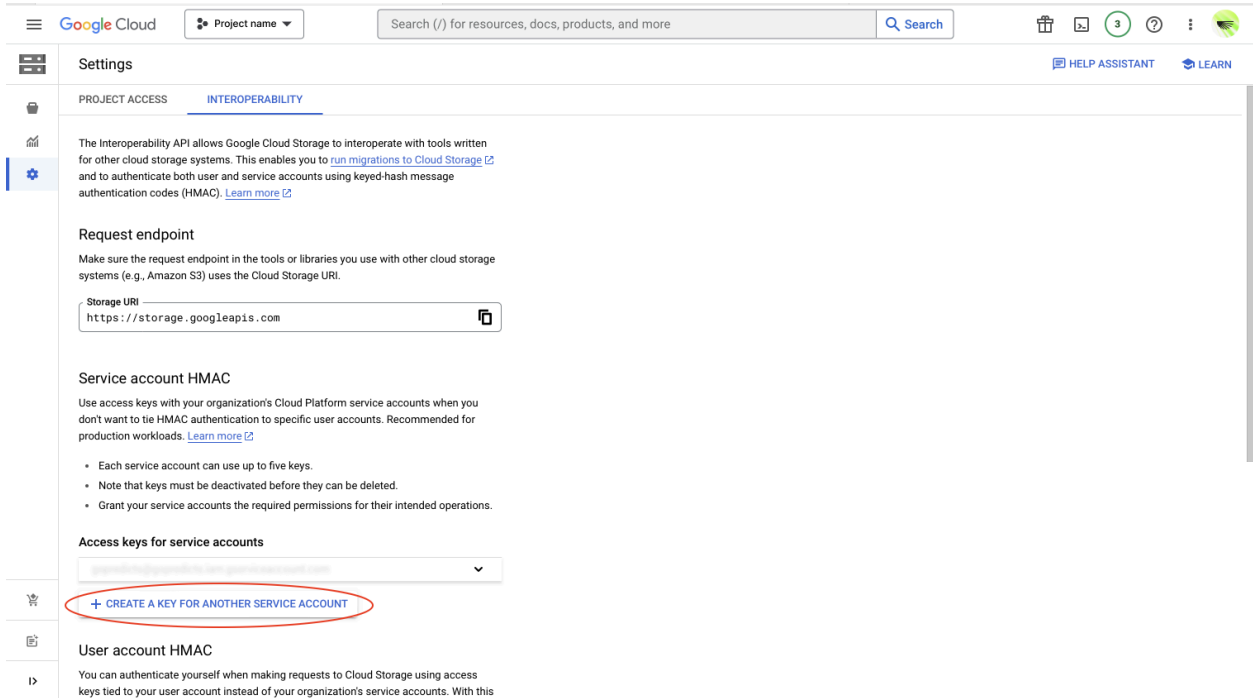
- **Location:** Select the same region you used when linking BigQuery in Step 2. For example, if you chose `eu-central-2` there, select `eu-central-2 (Region)` here. For more information, see [data export locations](#).
- **Storage class, access control, and protection:** Leave these at the defaults — Standard, Uniform, and None.

4. Click **Create**.



3d. Create a Cloud Storage HMAC key

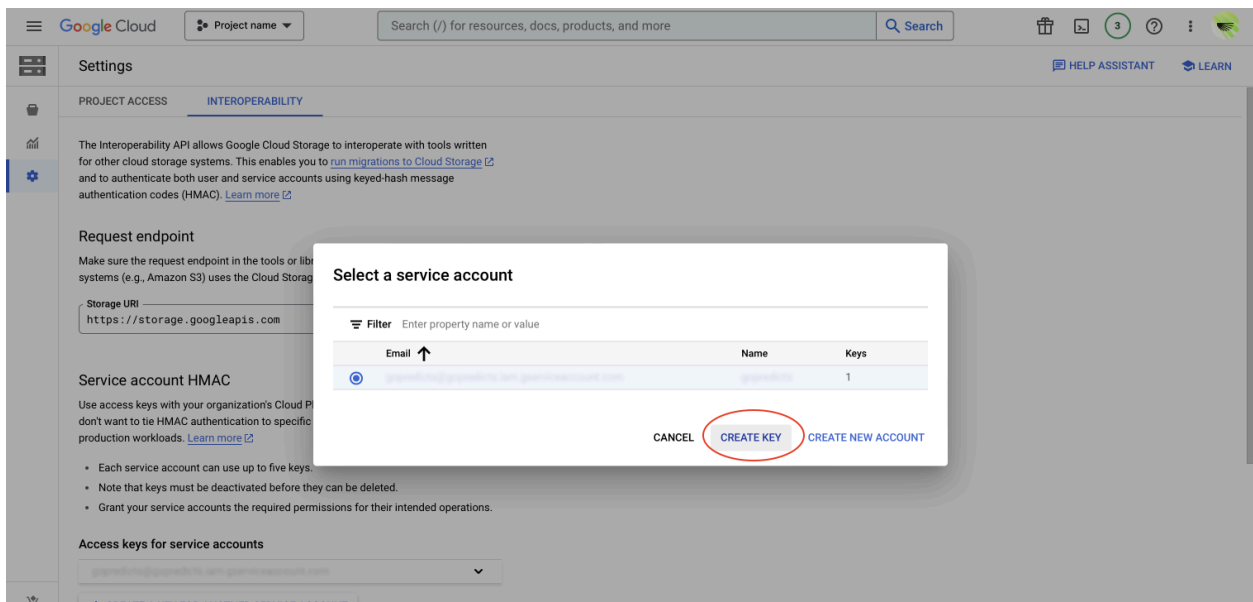
1. In the left navigation menu, go to **Cloud Storage > Settings**.
2. Click the **Interoperability** tab.



The screenshot shows the Google Cloud Storage Settings page, specifically the **INTEROPERABILITY** tab. The page is titled "Settings" and has a search bar at the top. The left navigation menu shows "Settings" selected. The main content area is titled "Interoperability" and contains the following sections:

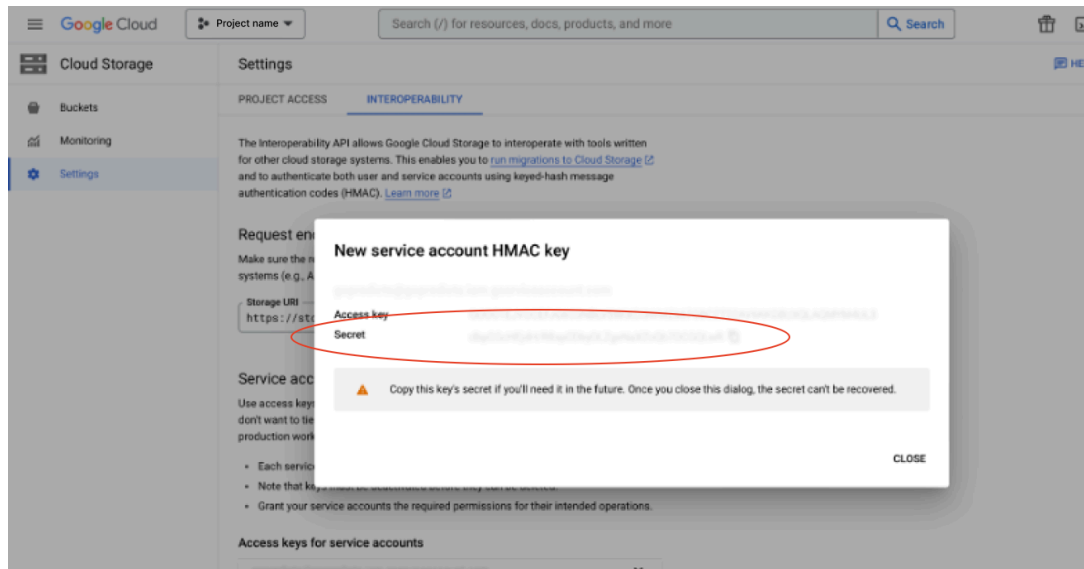
- Request endpoint**: A section explaining the Interoperability API and a text input field for the "Storage URI" with the value "https://storage.googleapis.com".
- Service account HMAC**: A section explaining how to use access keys with service accounts. It includes a list of instructions:
 - Each service account can use up to five keys.
 - Note that keys must be deactivated before they can be deleted.
 - Grant your service accounts the required permissions for their intended operations.
- Access keys for service accounts**: A dropdown menu showing "googlecloudstorage.googleapis.com-guestaccount.com". Below the dropdown is a button labeled "+ CREATE A KEY FOR ANOTHER SERVICE ACCOUNT", which is circled in red.
- User account HMAC**: A section explaining how to authenticate using user account keys.

3. Click **Create a key for another service account**.
4. Select the service account you created in **section 3a**, then click **Create key**.



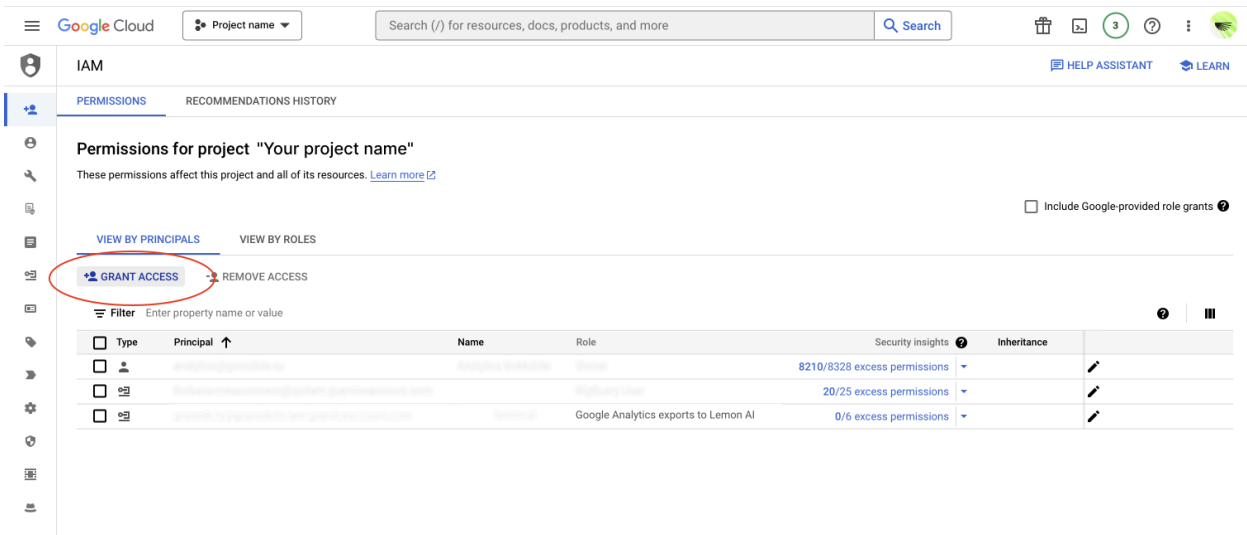
The screenshot shows the same Google Cloud Storage Settings page, but with a "Select a service account" dialog box open. The dialog box has a search bar and a table with the following columns: "Email", "Name", and "Keys". The table contains one row with the email "googlecloudstorage.googleapis.com-guestaccount.com", the name "googlecloudstorage.googleapis.com", and the number of keys "1". Below the table are three buttons: "CANCEL", "CREATE KEY" (circled in red), and "CREATE NEW ACCOUNT".

5. Copy and save both the **Access key** and the **Secret**. You'll share these with the Lemon AI team later. **The secret is shown only once.**

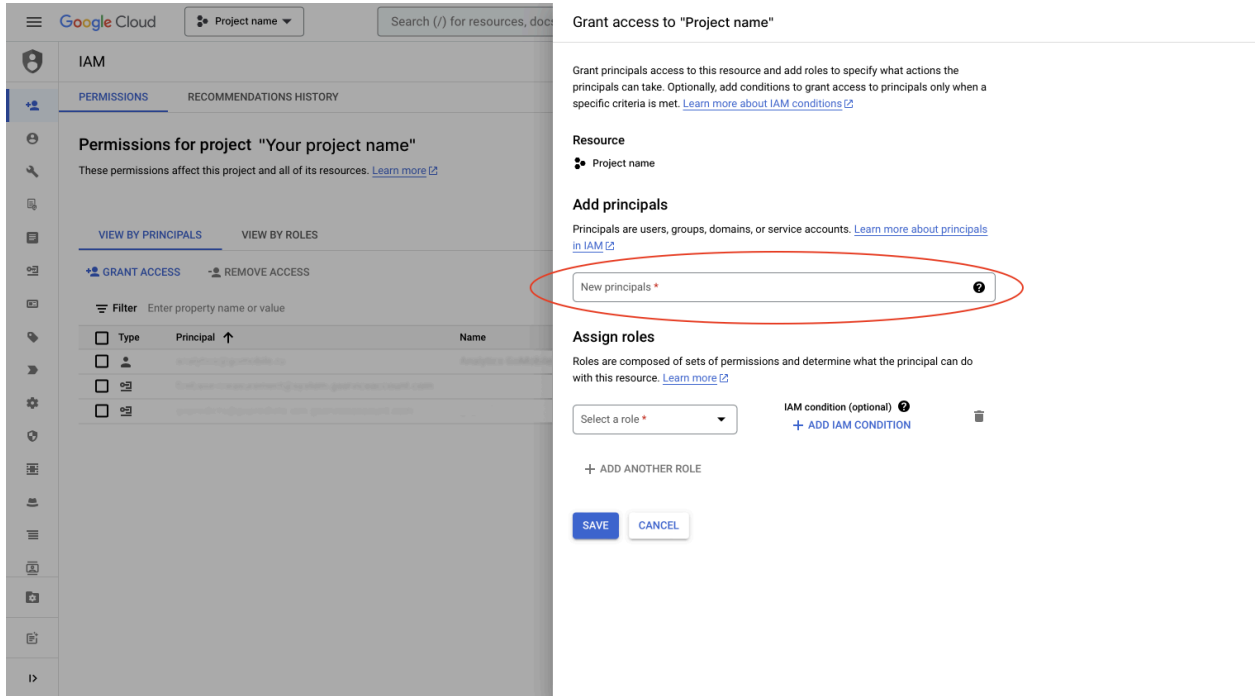


3e. Grant IAM permissions

1. In the left navigation menu, go to **IAM & Admin > IAM**.
2. Click **Grant Access**.



3. In the **New principals** field, enter the email address of the service account you created in section 3a.



The screenshot shows the Google Cloud IAM console. On the left, the 'Permissions for project "Your project name"' section is visible. The main panel shows the 'Grant access to "Project name"' dialog. The 'Resource' is 'Project name'. The 'Add principals' section has a text input field labeled 'New principals *' which is highlighted with a red oval. Below this, the 'Assign roles' section shows a 'Select a role *' dropdown, an 'IAM condition (optional)' button, and a '+ ADD ANOTHER ROLE' button. At the bottom are 'SAVE' and 'CANCEL' buttons.

4. Click **Add another role** and add the following three roles:
 - **BigQuery Data Viewer**
 - **BigQuery Job User**
 - **Storage Object Admin** — grants full access to objects in Cloud Storage.

Tip — restrict Storage Object Admin to your bucket only: To limit **Storage Object Admin** to the bucket you created (instead of all buckets), click **Add IAM condition** after selecting the role. In the condition editor, set the **Resource name** to `projects/_/buckets/<BUCKET_NAME>`, replacing `<BUCKET_NAME>` with your bucket name — for example, `projects/_/buckets/lemonai_123`.

5. Click **Save**.

Title *

for Lemon AI bucket only

Description

CONDITION BUILDER

CONDITION EDITOR

Condition type

Name

Operator

Starts with

Value

projects/_/buckets/<BUCKET N

?

×

ADD

SAVE

CANCEL

Step 4: Share credentials with Lemon AI

After completing the steps above, share the following seven items with the Lemon AI team. Items 1–4 are available immediately. Item 5 (Dataset ID) becomes available approximately 24 hours after you complete the setup.

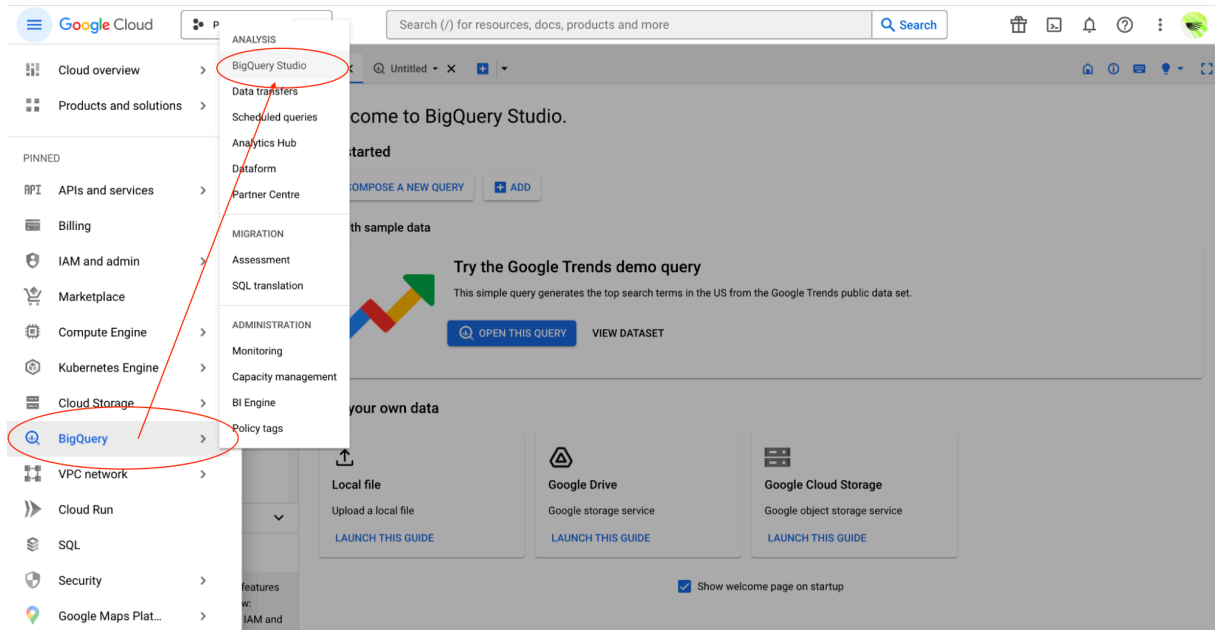
#	Credential / item	Description
1	Service account key (JSON file)	Downloaded in section 3b. Share the .json file directly.
2	HMAC Access key & Secret	Generated in section 3d. The secret is shown only once.
3	Cloud Storage bucket name & location	Configured in section 3c.
4	BigQuery location	The data location you selected in Step 2.
5	Dataset ID	Available ~24 hours after setup. Instructions below.
6	Measurement ID	Found in Google Analytics Data Streams. Instructions below.
7	Measurement Protocol API secret	Created in Google Analytics Data Streams. Instructions below.

Items 1–4 are files and values you already have from the previous steps. The following sections show you how to locate items 5, 6, and 7.

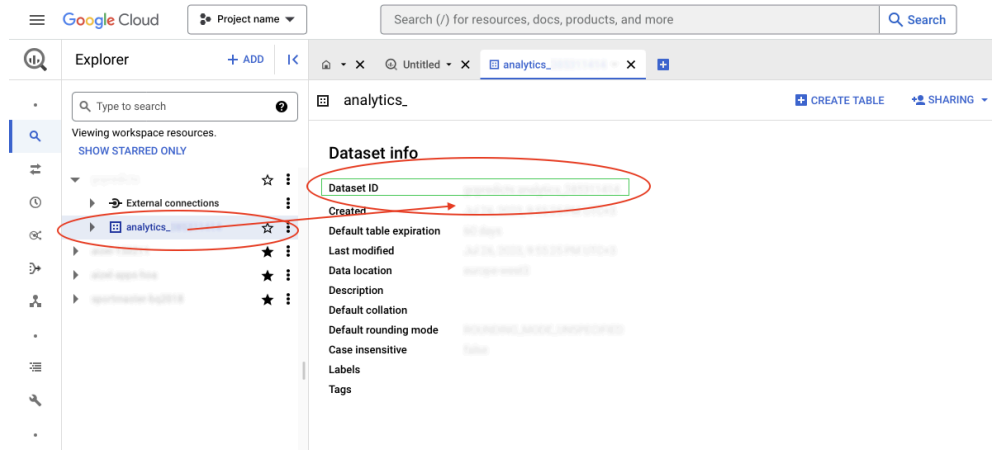
Item 5: Find your Dataset ID

The Dataset ID is created automatically by Google once the BigQuery link is active. It typically becomes available **approximately 24 hours** after you complete Step 2.

1. In the Google Cloud Console, go to **BigQuery > BigQuery Studio**.



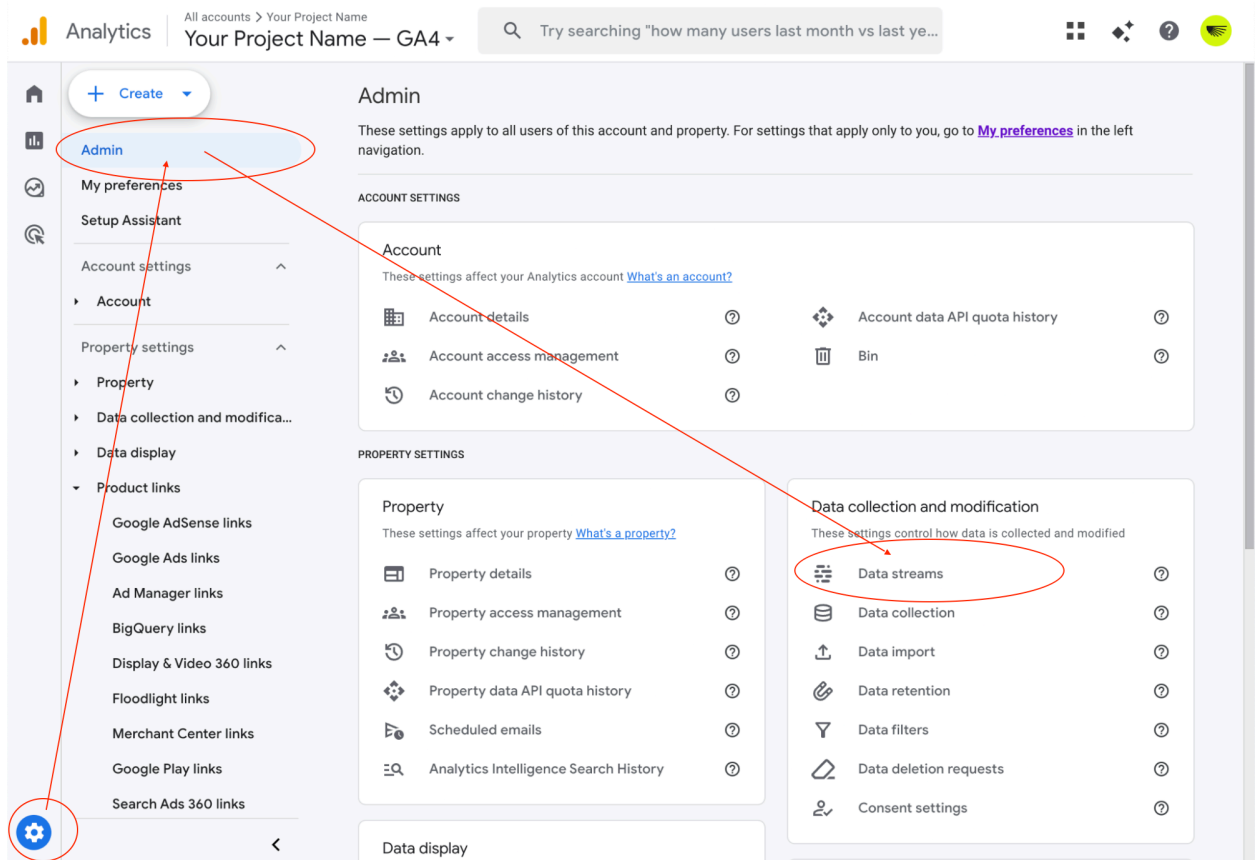
2. In the left panel, locate your dataset — it appears at the top of the resource tree. The name follows the format `analytics_XXXXXXXX`, for example `analytics_1234567`.



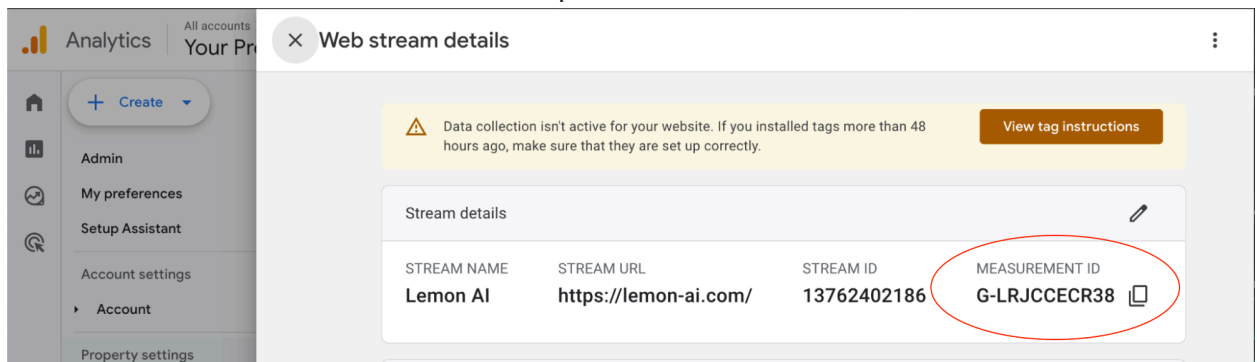
3. Share this Dataset ID with the Lemon AI team.

Item 6: Find your Measurement ID

1. In your [Google Analytics account](#), click **Admin** (the gear icon in the bottom-left corner).



2. In the **Property** setting, under **Data Collection and Modification**, click **Data Streams**.
3. Select your data stream from the list.
4. The Measurement ID appears in the top-right corner of the stream details panel. It follows the format **G-XXXXXXXXXX**, for example **G-ABCD1234**.



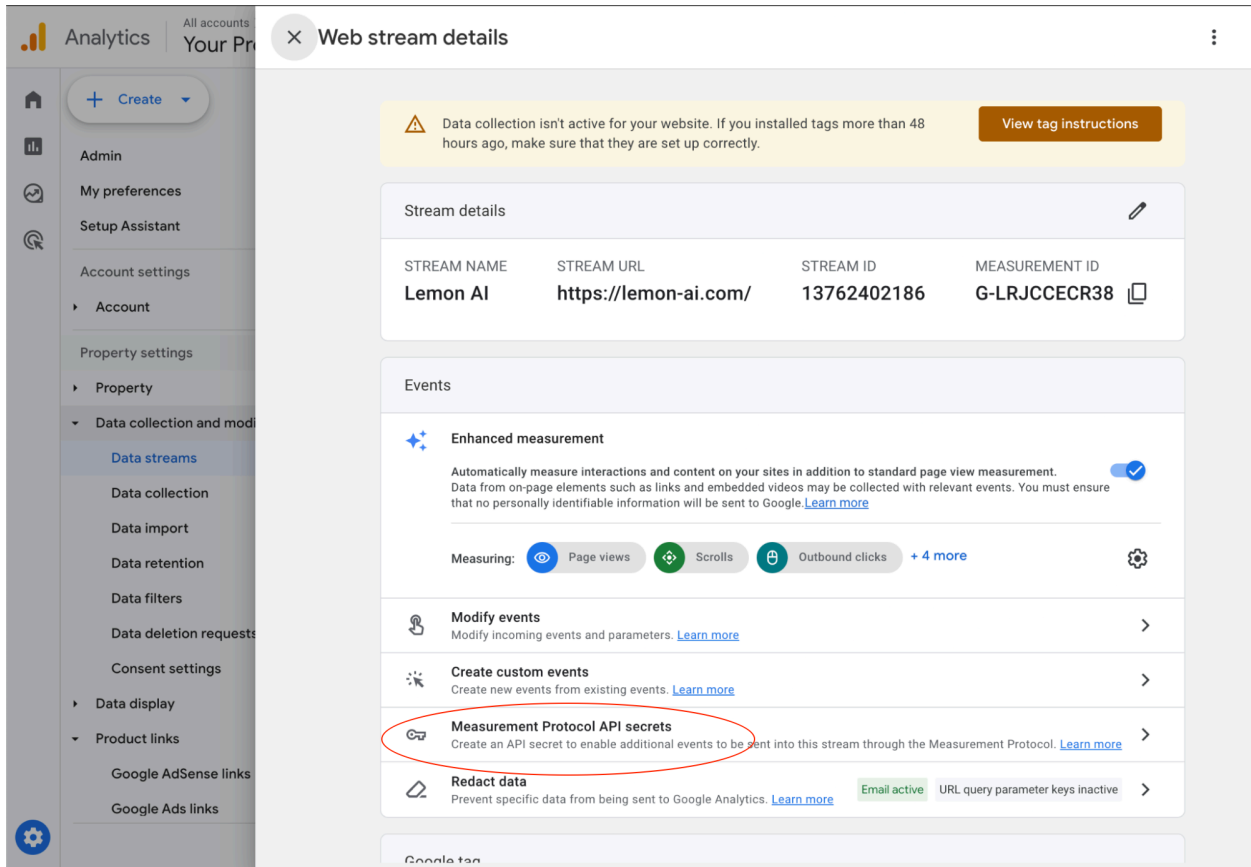
5. Share this Measurement ID with the Lemon AI team.

For app data streams: Instead of a Measurement ID, share the **Stream ID** and the **Firebase App ID** with the Lemon AI team.

Item 7: Create a Measurement Protocol API secret

Complete this in the same Data Streams screen you used in Item 6.

1. In the Web stream details panel, click **Measurement Protocol API secrets**.



The screenshot shows the 'Web stream details' panel in the Lemon AI interface. On the left is a sidebar with navigation options like 'Admin', 'My preferences', 'Setup Assistant', 'Account settings', 'Property settings', 'Data collection and modification', 'Data display', and 'Product links'. The main area is titled 'Web stream details' and contains a warning about data collection status, a 'Stream details' table, and an 'Events' section. The 'Events' section lists various event types, with 'Measurement Protocol API secrets' circled in red. Below this are options for 'Modify events', 'Create custom events', and 'Redact data'.

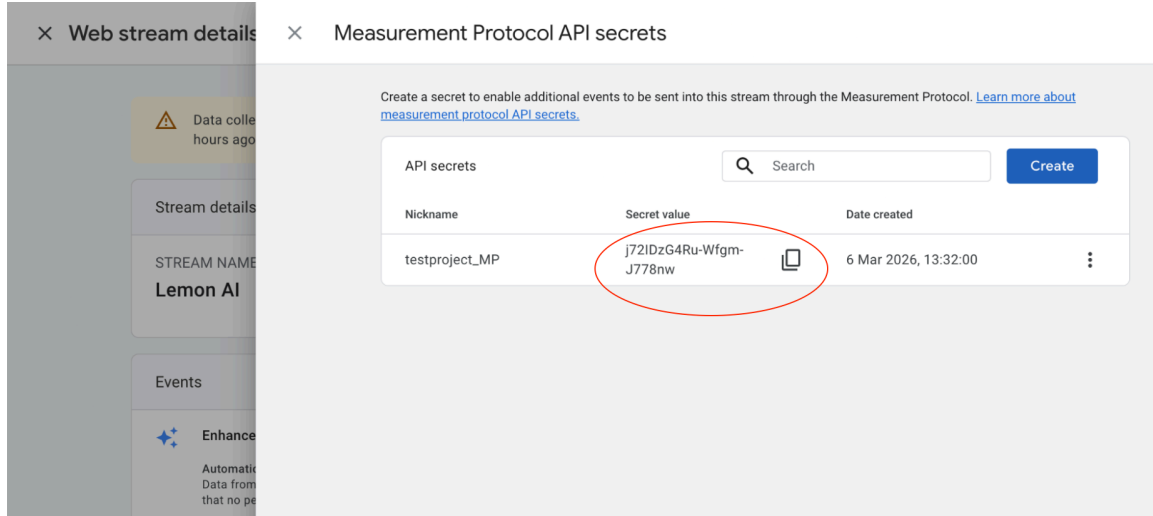
STREAM NAME	STREAM URL	STREAM ID	MEASUREMENT ID
Lemon AI	https://lemon-ai.com/	13762402186	G-LRJCCECR38

Events

- Enhanced measurement** (checked): Automatically measure interactions and content on your sites in addition to standard page view measurement. Data from on-page elements such as links and embedded videos may be collected with relevant events. You must ensure that no personally identifiable information will be sent to Google. [Learn more](#)
- Measuring:** Page views, Scrolls, Outbound clicks, + 4 more
- Modify events**: Modify incoming events and parameters. [Learn more](#)
- Create custom events**: Create new events from existing events. [Learn more](#)
- Measurement Protocol API secrets** (circled in red): Create an API secret to enable additional events to be sent into this stream through the Measurement Protocol. [Learn more](#)
- Redact data**: Prevent specific data from being sent to Google Analytics. [Learn more](#) | Email active | URL query parameter keys inactive

2. Click **Create**.
3. Enter a nickname for the secret. You can use any name — for example, `yourcompany_MP`.

- Click **Create**. The secret value appears in the centre of the screen, for example, `1a2b345cd`.



- Share this API secret with the Lemon AI team.

Firestore app setup: If you're integrating an Android app, also go to **Firestore > Project Settings > Integrations > BigQuery** and confirm that **Include Advertising Identifiers in Export** is enabled.

Setup is complete.

Your Google Analytics and BigQuery integration is complete. Lemon AI can now access your data and begin optimizing your Google Ads campaigns.