

# Access Google Sheets Data Using a Service Account

Accessing Google Sheets data programmatically can be essential for server-side applications that need to read or manipulate spreadsheet data without human interaction. Whether you're automating reports, synchronizing data, or managing inventory systems, accessing Google Sheets through a Service Account provides a secure and efficient solution for backend environments.

This tutorial will guide you through accessing a Google Sheet's data using a Service Account, which is ideal for server environments.

## Prerequisites

Before you start, ensure you have the following:

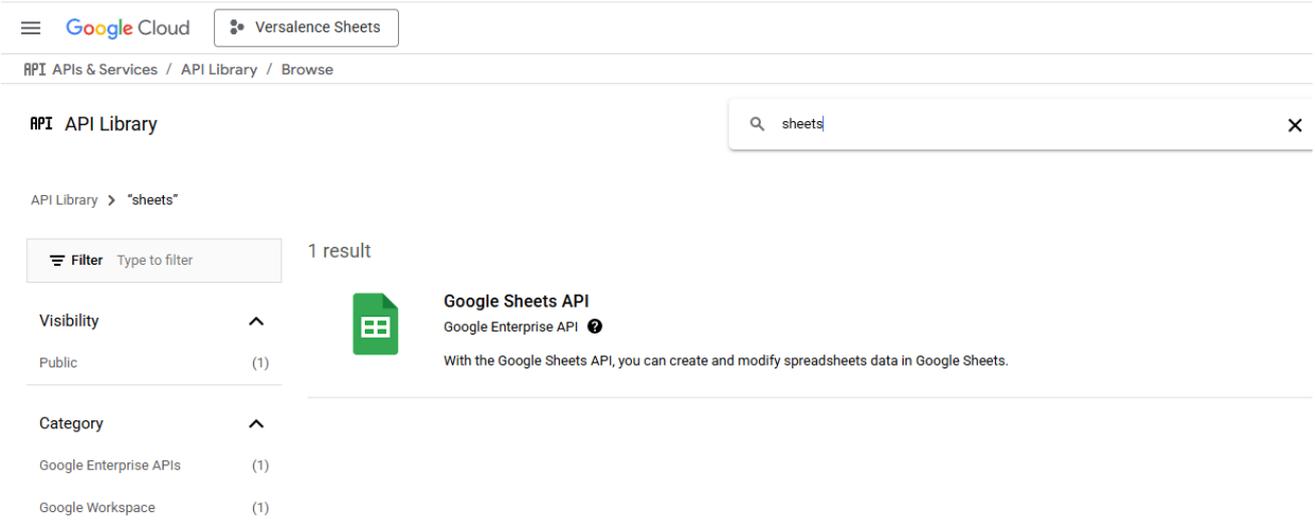
- A **Google Account**: Access to the Google Cloud Console.
- An **Existing Google Spreadsheet**: A Google Sheet that you want to access.

## Step 1: Enable the Google Sheets API

The screenshot shows the Google Cloud console interface. At the top, there is a navigation bar with the Google Cloud logo, the project name 'Versalence Sheets', and a search bar. Below the navigation bar, the main content area displays a 'Welcome' message and the project name 'Versalence Sheets'. The project number is 339949648171 and the project ID is versalence-sheets. There are several quick action buttons: 'Create a VM', 'Run a query in BigQuery', 'Deploy an application', and 'Create a storage bucket'. A 'Try Gemini 2.0 Flash' button is also visible. Below these buttons, there is a 'Quick access' section with a grid of service tiles: 'APIs & Services', 'IAM & Admin', 'Billing', 'Compute Engine', 'Cloud Storage', 'BigQuery', 'VPC network', and 'Kubernetes Engine'. At the bottom, there is a 'VIEW ALL PRODUCTS' button.

To access Google Sheets programmatically, you first need to enable the Google Sheets API in your Google Cloud project.

1. **Go to the [Google Cloud Console](#).**
2. **Create a New Project** (if you don't have one):
  - Click the project dropdown at the top of the page.
  - Click **New Project**.
  - Enter a project name (e.g., "Google Sheets Node.js Access").
  - Click **Create**.
3. **Select Your Project:**
  - Ensure your new project is selected in the project dropdown.



4. **Enable the Google Sheets API:**
  - Navigate to **APIs & Services > Dashboard**.
  - Click **Enable APIs and Services**.
  - Search for **Google Sheets API**.
  - Click on **Google Sheets API** and then click **Enable**.

With the API enabled, your project can now interact with Google Sheets data programmatically, preparing for the next steps.

## Step 2: Create a Service Account and Generate a Key File

A Service Account allows server-side applications to authenticate without user interaction.

Google Cloud | Versalence Sheets | Search (/) for resources, docs, products, and more

APIs & Services | Credentials | + Create credentials | Delete | Restore deleted credentials

Enabled APIs & services | Library | Credentials | OAuth consent screen | Page usage agreements

Create credentials to access your enabled APIs. [Learn more](#)

Remember to configure the OAuth consent screen with information about your application. [Configure consent screen](#)

API Keys

| <input type="checkbox"/> | Name      | Creation date ↓ | Restrictions | Actions                    |
|--------------------------|-----------|-----------------|--------------|----------------------------|
| <input type="checkbox"/> | API key 1 | Apr 12, 2025    | –            | <a href="#">Show key</a> ⋮ |

OAuth 2.0 Client IDs

| <input type="checkbox"/>    | Name | Creation date ↓ | Type | Client ID | Actions |
|-----------------------------|------|-----------------|------|-----------|---------|
| No OAuth clients to display |      |                 |      |           |         |

Service Accounts [Manage service accounts](#)

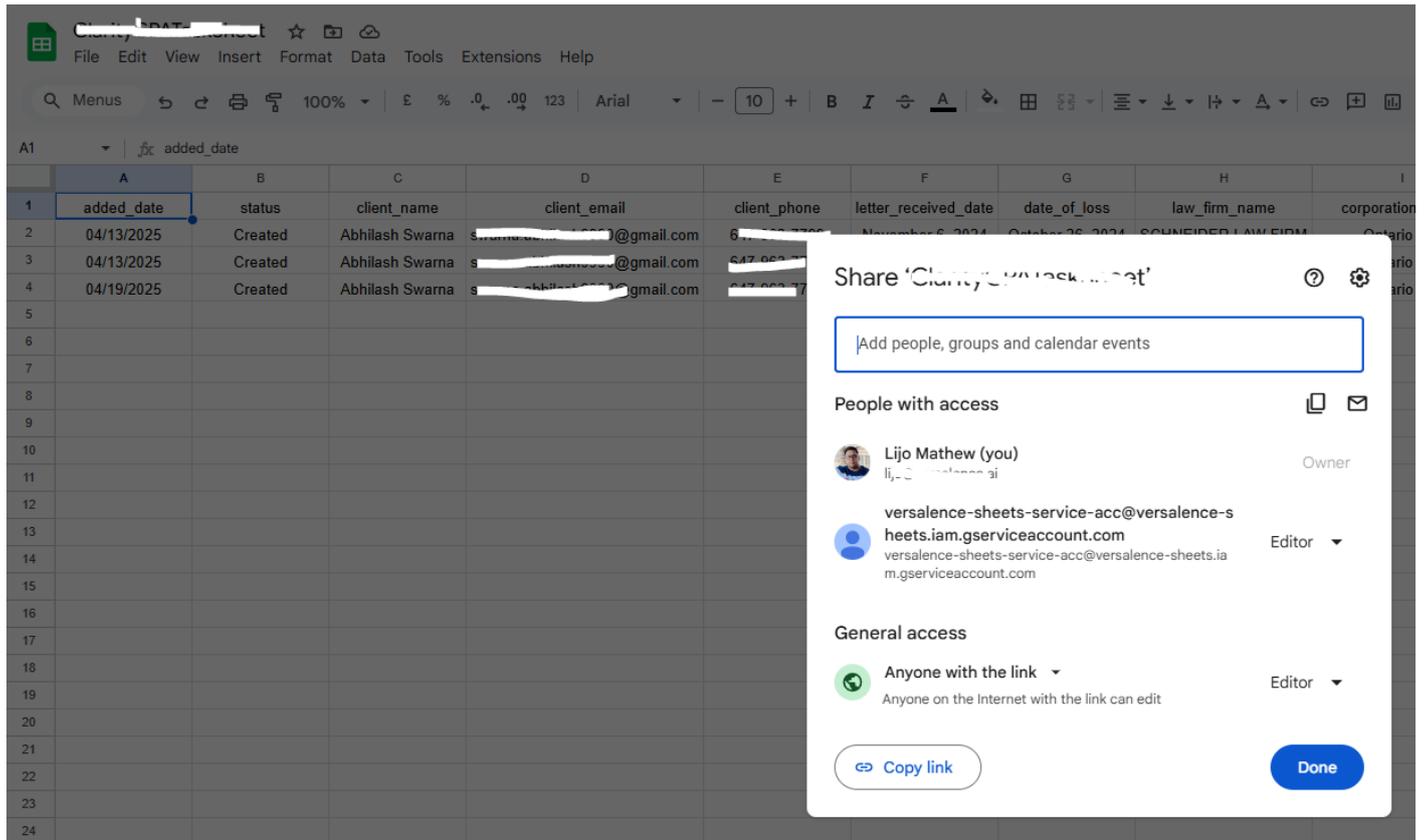
| <input type="checkbox"/> | Email   | Name ↑                        | Actions                                     |
|--------------------------|---|-------------------------------|---|
| <input type="checkbox"/> | versalence-sheets-service-acc@versalence-sheets.iam.gserviceaccount.com | Versalence Sheets Service Acc | <a href="#">Edit</a> <a href="#">Delete</a> |

- Navigate to Service Accounts:**
  - Go to **APIs & Services > Credentials**.
  - Click on **Create Credentials** and select **Service Account**.
- Create a Service Account:**
  - Service Account Name:** Enter a name (e.g., “sheets-access-account”).
  - Service Account ID:** This will auto-populate based on the name.
  - Description:** Optional.
  - Click **Create and Continue**.
- Set Service Account Permissions:**
  - For this tutorial, you don’t need to grant any specific roles.
  - Click **Continue**.
- Grant Users Access to This Service Account:**
  - Skip this step by clicking **Done**.
- Generate a JSON Key File:**
  - You should now see your service account listed.
  - Click on the **Service Account** you just created.
  - Navigate to the **Keys** tab.
  - Click **Add Key > Create New Key**.
  - Choose **JSON** as the key type.
  - Click **Create**.
  - A JSON key file will be downloaded to your computer (e.g., `service-account-key.json`).
- Secure the Key File:**

**Important:** Do not commit this file to version control. It’s sensitive information.

# Step 3: Share the Spreadsheet with the Service Account Email

The Service Account acts like a virtual user. You need to share the spreadsheet with the Service Account's email address.



The screenshot shows a Google Sheet with the following data:

| added_date | status  | client_name     | client_email              | client_phone | letter_received_date | date_of_loss     | law_firm_name      | corporation |
|------------|---------|-----------------|---------------------------|--------------|----------------------|------------------|--------------------|-------------|
| 04/13/2025 | Created | Abhilash Swarna | swarna.abhilash@gmail.com | 647-869-3700 | November 6, 2024     | October 26, 2024 | SCHNEIDER LAW FIRM | Quario      |
| 04/13/2025 | Created | Abhilash Swarna | swarna.abhilash@gmail.com | 647-869-3700 |                      |                  |                    | Quario      |
| 04/19/2025 | Created | Abhilash Swarna | swarna.abhilash@gmail.com | 647-869-3700 |                      |                  |                    | Quario      |

The share dialog is titled 'Share "Clients Data"'. It shows the following settings:

- People with access:
  - Lijo Mathew (you) - Owner
  - versalence-sheets-service-acc@versalence-sheets.iam.gserviceaccount.com - Editor
- General access:
  - Anyone with the link - Editor

### 1. Get the Service Account Email:

- In the **Details** tab of your Service Account, locate the **Email** field.
- It will look like: `your-service-account-name@your-project-id.iam.gserviceaccount.com`.

### 2. Share the Spreadsheet:

- Open your Google Sheet in a browser.
- Click the **Share** button.
- Enter the Service Account email.
- Set the permission to **Editor** (or **Viewer** if you only need read access).
- Click **Send**.

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