

Real-time Gmail webhook-style setup using Gmail API + Google Cloud Pub/Sub, which is only available for Google Workspace accounts.

STEP 1: Enable Gmail API and Pub/Sub API

1. Go to: <https://console.cloud.google.com/apis/library>
2. Enable:
 - **Gmail API**
 - **Cloud Pub/Sub API**
3. Go to: **IAM & Admin** → **Service Accounts**
 - Create a service account if you don't have one
 - Grant it **Pub/Sub Publisher**

STEP 2: Create a Pub/Sub Topic and Subscription

Create a Pub/Sub Topic via UI

1. Go to the Google Cloud Console Pub/Sub page.
2. Select your **project** from the top navigation bar.
3. Click **"Topics"** from the left menu.
4. Click **"Create Topic"**.
 - **Topic ID**: e.g., gmail-notify-topic
 - **Topic name** (auto-filled):
projects/your-project-id/topics/gmail-notify-topic
 - Leave other fields default unless you have a special config.
5. Click **"Create"**

Create a Subscription via UI

1. After creating the topic, you'll be redirected to the topic page.
2. Click **"Create Subscription"**.
3. Fill out the form:

Field	Value
Subscription ID	gmail-subscription
Delivery type	Push

Push endpoint	https://yourdomain.com/gmail/webhook (<i>must be HTTPS</i>)
Authentication	Choose "Use a service account" and select your service account

4. Click **"Create"**.

Grant Gmail API Access to the Pub/Sub Topic

You must allow Gmail to publish to your topic:

1. Go to the **topic's page**
2. Click **"Permissions" tab**
3. Click **"Add Principal"**

Field	Value
New principal	gmail-api-push@system.gserviceaccount.com
Role	Pub/Sub Publisher

4. Click **Save**

STEP 4: Register a Gmail Watch with the API

Use the `watch()` method to tell Gmail to notify your Pub/Sub topic on new messages. Do it programmatically.

STEP 5: Build Your Backend Listener

Make a API with `/gmail/webhook`

STEP 6: Keep the Watch Alive

The Gmail watch **expires after 7 days**, so schedule the `setup_watch()` call to repeat weekly via:

- cron
- Cloud Scheduler
- Celery Beat

Key Notes

Thing	Details
Gmail watch permission	Works only for Google Workspace users
Push endpoint	Must be HTTPS + publicly accessible
Pub/Sub authentication	Uses service account with proper roles
Gmail push delay	Near-real-time (usually seconds)
Retry mechanism	Google retries webhook on failure, so respond with 200 fast