**DOCUMENTATION:**

TOPIC:

USING AI AGENTS AS ASSISTANTS TO REDUCE THE WORKLOAD FOR EACH INDIVIDUAL

SOURCES: DOCKER

**1. Introduction**

The purpose of this project is to build an **email automation system** that connects Gmail with intelligent workflows using **n8n**, containerized through **Docker**. The system enables event-driven automation, where incoming emails can trigger workflows such as sending automated replies, filtering content, forwarding messages, or invoking AI-powered agents to process email content.

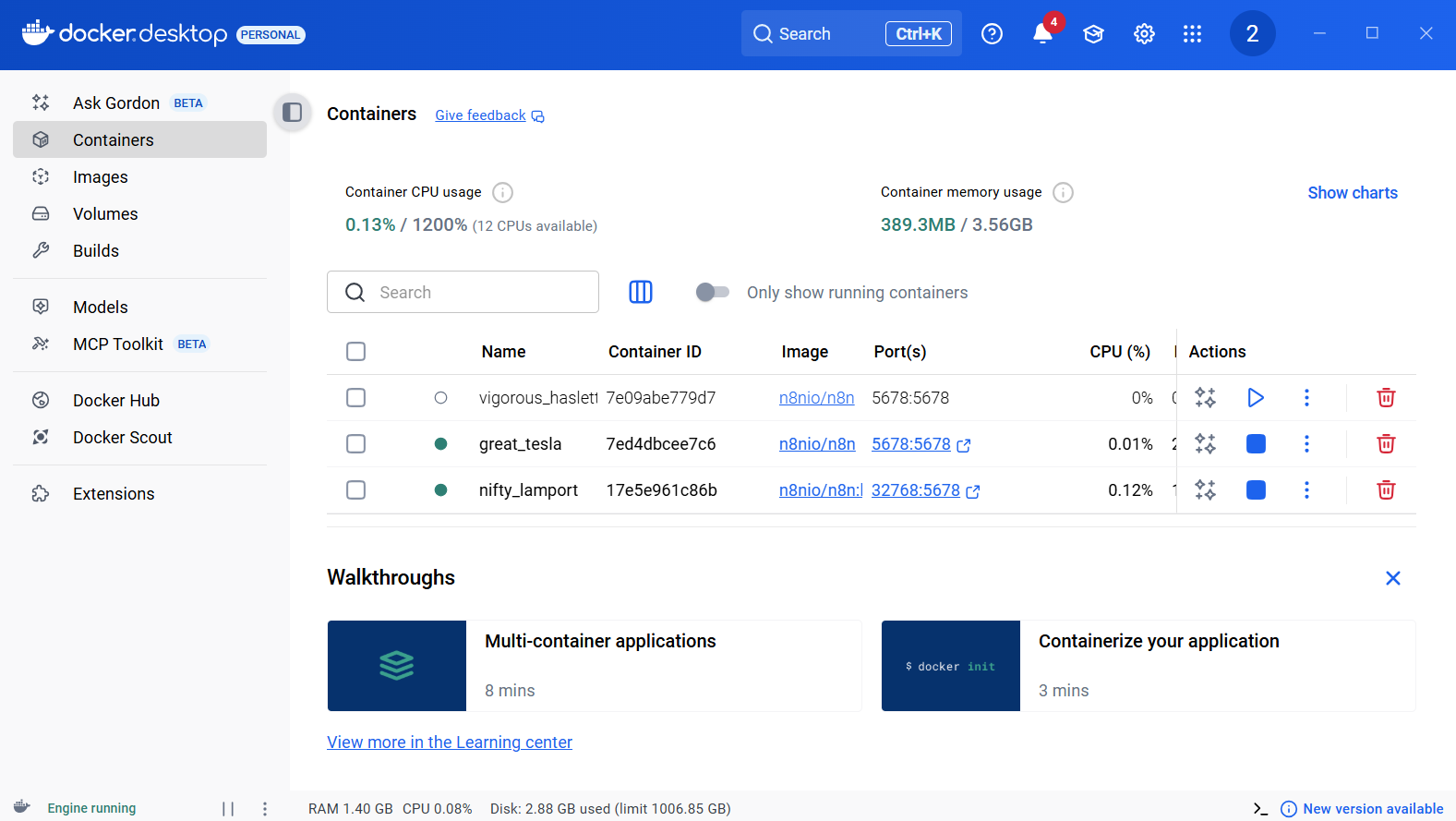
This documentation outlines the architecture, setup process, components, and functionality of the model.

**2. Key Technologies**

**2.1 Docker**

* **Docker** is a platform used to containerize applications, ensuring portability, consistency, and scalability.
* In this project, Docker is used to run the **n8n workflow automation tool** in an isolated environment.
* Persistent storage is mounted to avoid data loss, and the container exposes port 5678 for web access.

**DOCKER INTERFACE:**



**n8n (Workflow Automation Tool)**

* **n8n** is a workflow automation platform.
* It allows users to design workflows by connecting **nodes**, each representing a task

(e.g: sending an email, making an API call, or running code).

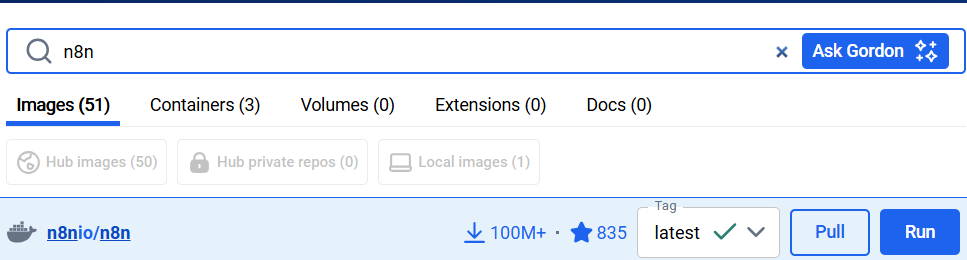
* n8n supports integrations with hundreds of services, including **Gmail**.
* In this project, n8n handles:
  1. Listening to incoming Gmail events.
  2. Triggering the automation flow.
  3. Passing email data to AI agents.
  4. Sending automated responses.

**STEPS TO INSTALL N8N:**

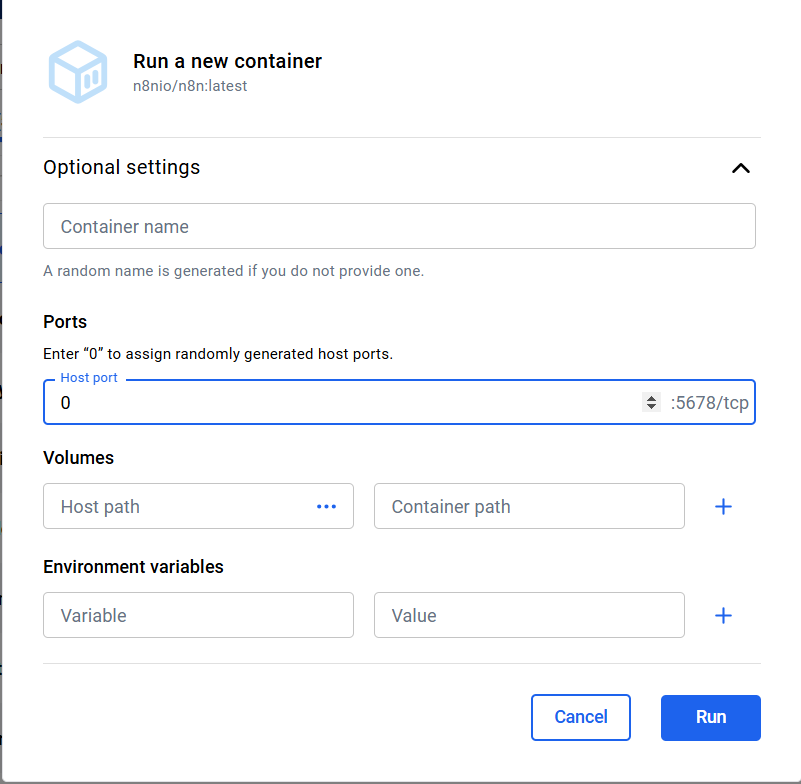
Search for N8N

Download N8N for creating Workflows

Pull and Run the N8N workflow



Enter 0 in hostport and run



As soon as you run the N8N Workflow you will see it in Containers

Run the host portal

To make the host and our portal same run the below command:

**docker run -p 5678:5678 n8nio/n8n**

**Gmail Integration**

* Gmail is integrated using the Gmail Trigger Node in n8n.
* This node is authenticated via OAuth2 and listens for new emails arriving in the inbox.
* The email data (sender, subject, body, attachments) is passed into the workflow for further processing.

**Workflow Nodes**

* Trigger Node (Gmail Trigger) → Initiates the workflow when a new email is received.
* Function Node → Allows custom JavaScript logic to parse, filter, or format email content.
* AI Agent Node (via API or custom integration) → Sends email content to an AI service (e.g., GPT-based model) for summarization, classification, or intelligent reply generation.
* Gmail Node (Send) → Sends an automated reply or forwards processed results.

**AI Agents**

* AI agents act as the intelligence layer in the automation pipeline.
* They are responsible for:
  + Understanding the context of incoming emails.
  + Classifying emails (e.g., support, inquiry, spam).
  + Generating automated responses.
  + Performing tasks such as extracting important details or scheduling.
* The AI agents are connected to n8n using API calls or custom connectors.

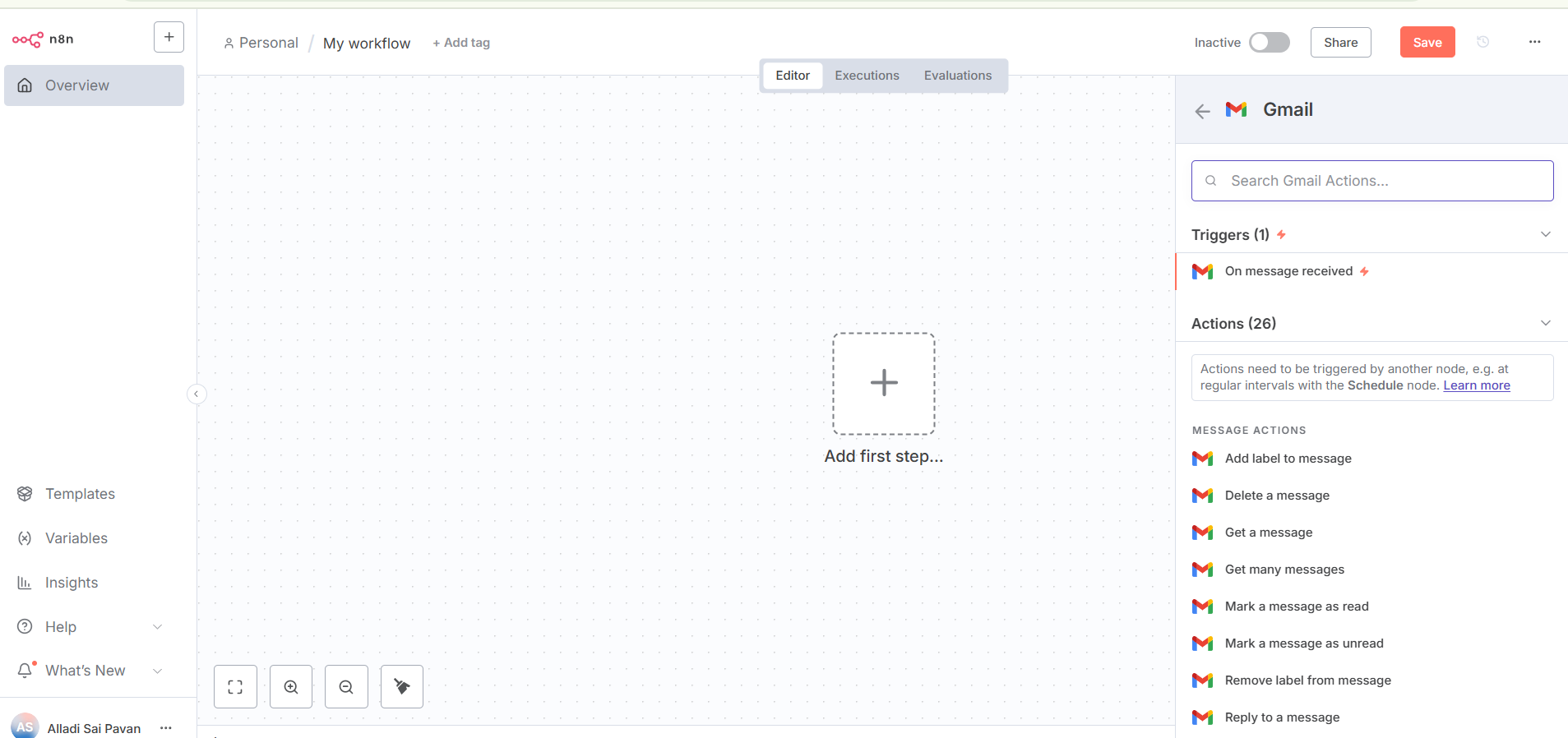
**Flow Explanation:**

1. A new email arrives in Gmail.
2. Gmail Trigger Node in n8n captures the event.
3. The Function Node processes email metadata and content.
4. The AI Agent Node analyzes the email and generates a response.
5. The Gmail Send Node replies to the sender with the AI-generated response**.**

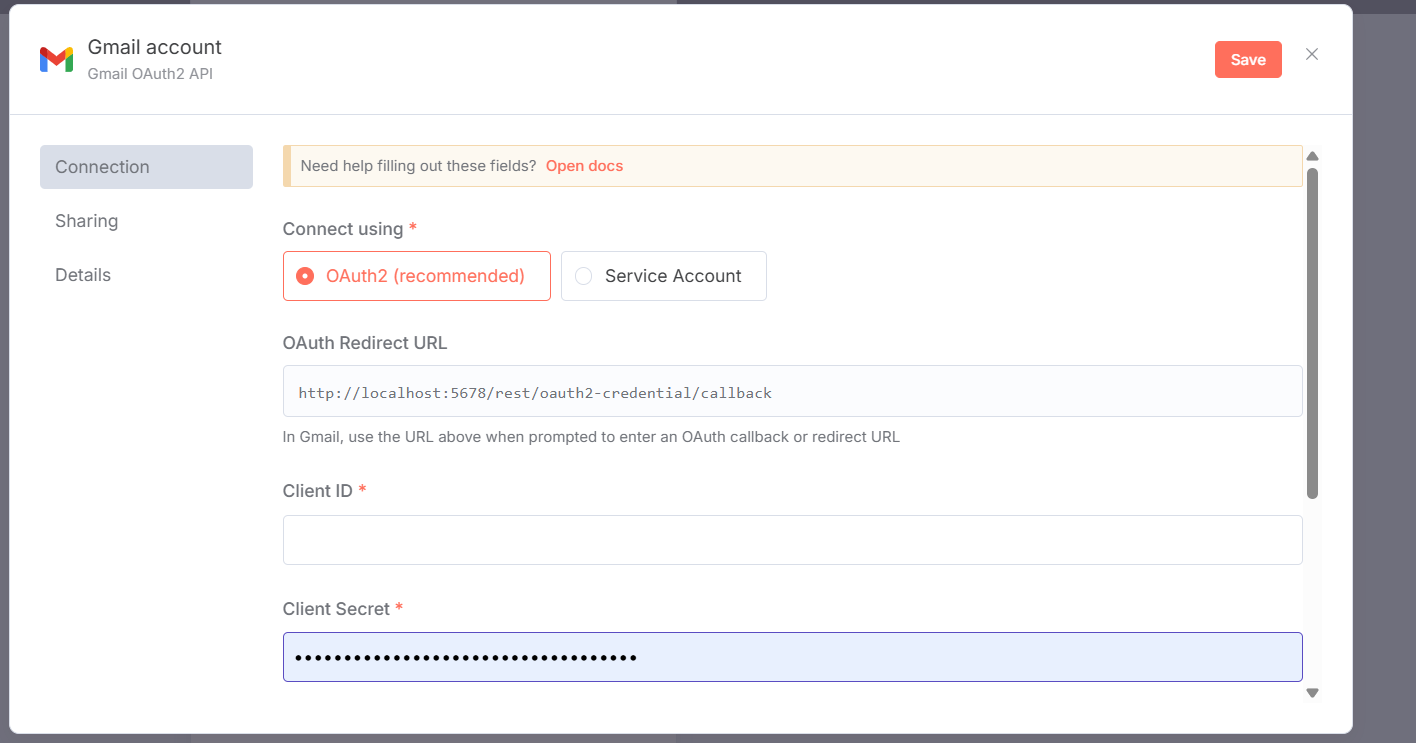
**Creating the Workflow**

1. Create Gmail Trigger Node – Authenticate with Gmail API and set it to monitor the inbox.
2. Add Function Node – Apply filtering or preprocessing (e.g., detect subject keywords).
3. Integrate AI Agent Node – Call AI model API to analyze or draft responses.
4. Add Gmail Send Node – Send the AI-generated response back to the sender.
5. Save and Activate Workflow – Ensures the automation runs continuously.

1.Search for Gmail



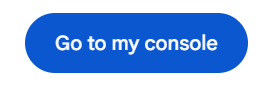
We need to get Client ID and Client Secret

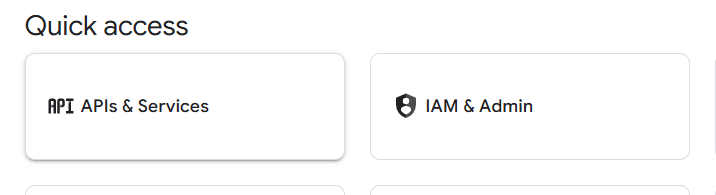


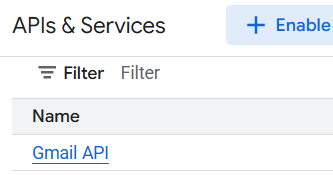
To get Client Id and Client Secret:

1.Search for Google cloud in chrome

C;ick on go to my console



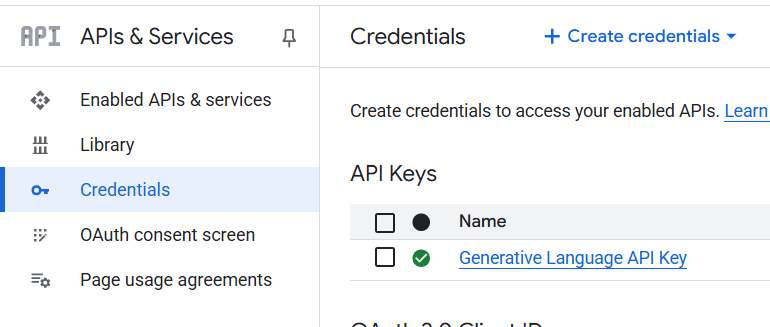


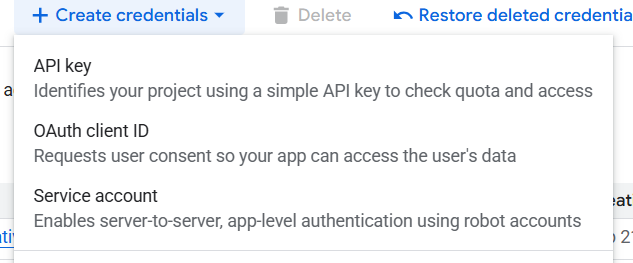


Click on Gmail API

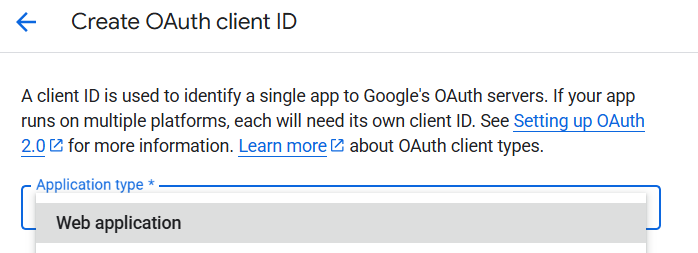
Click on Credentials

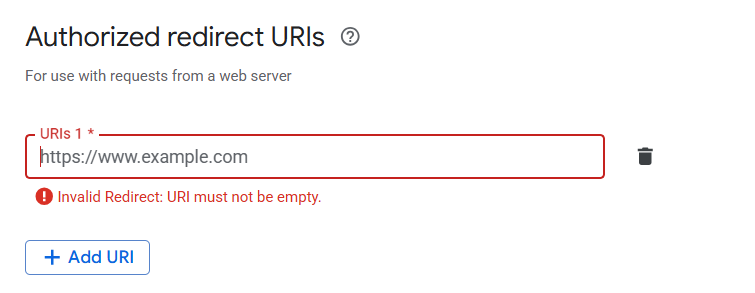
Then Create Credentials

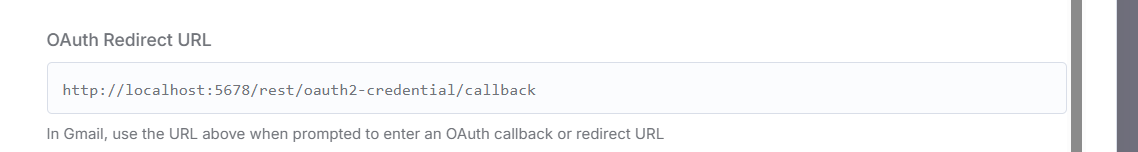




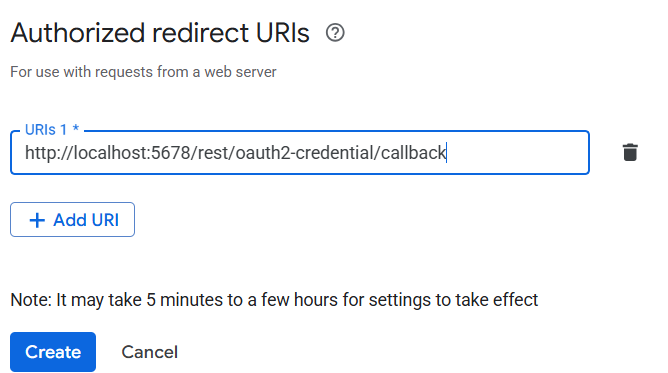
Click on OAuth







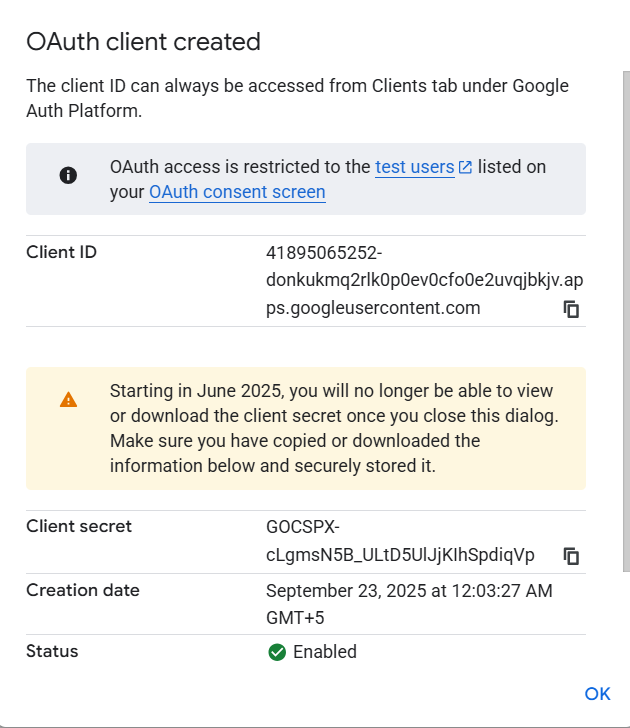
Add the n8n URL and add it in redirect URLs



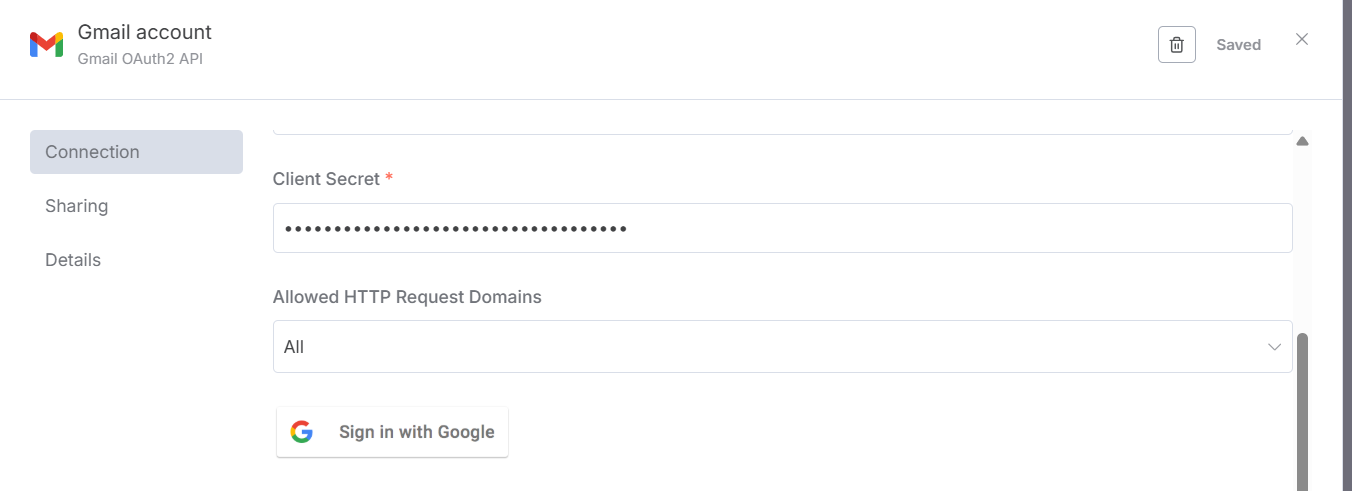
Click on create

We will get Client ID and Client Secret

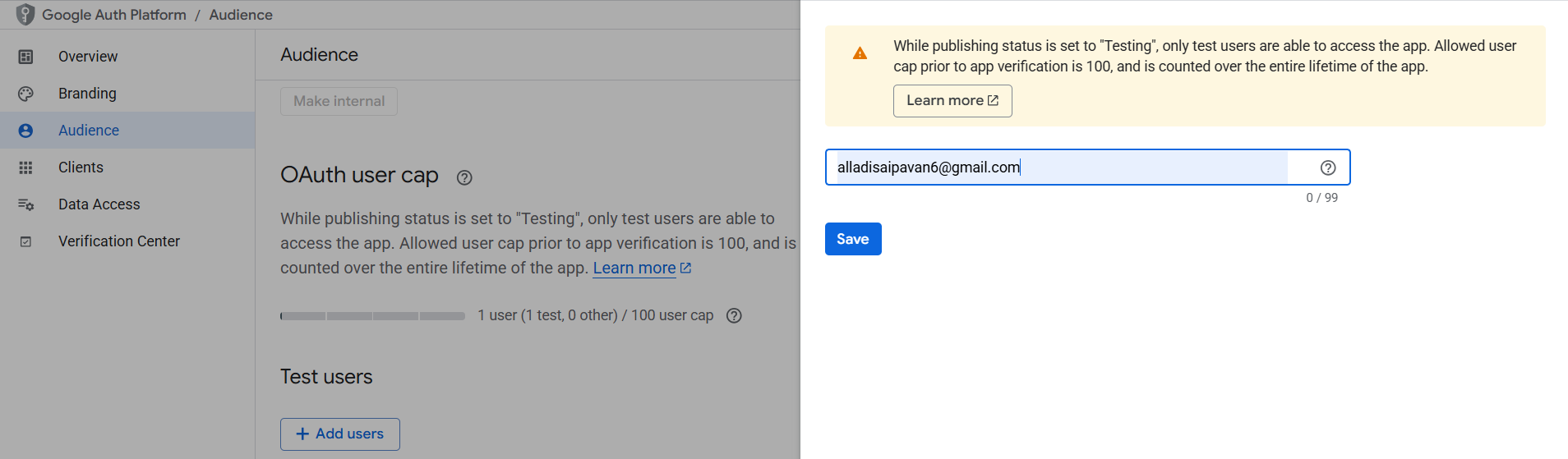
Copy that in N8N

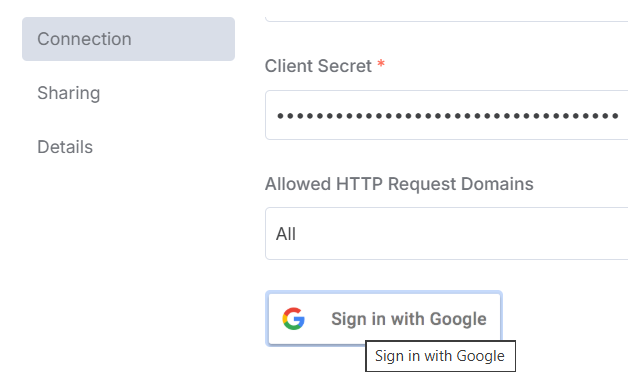


Then save it



Go to Audience then add user then add ur Gmail account

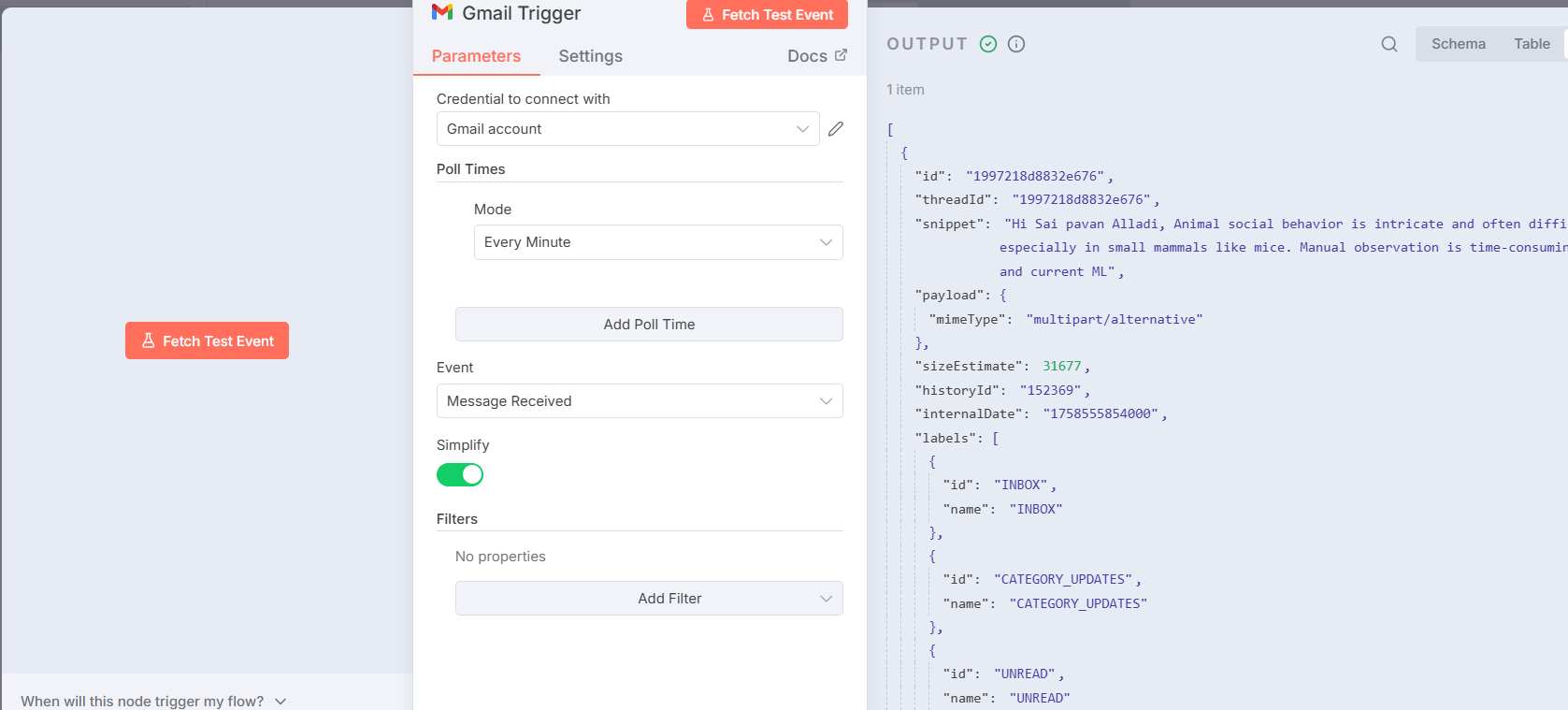




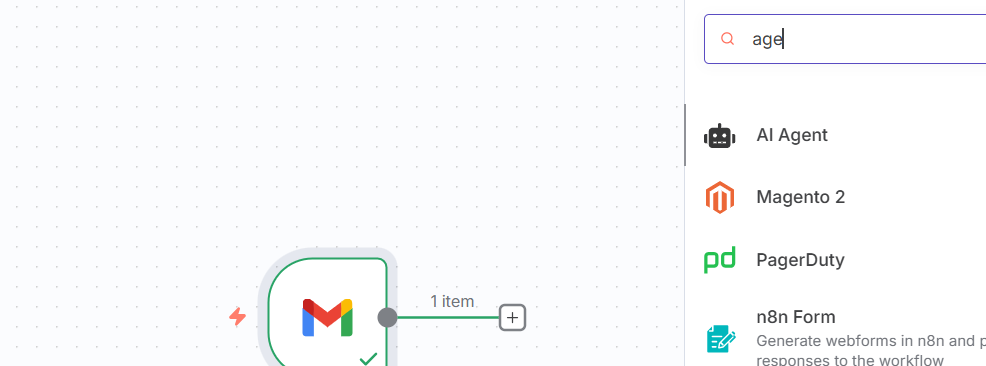
Sign in with google

Then after click on continue everywhere

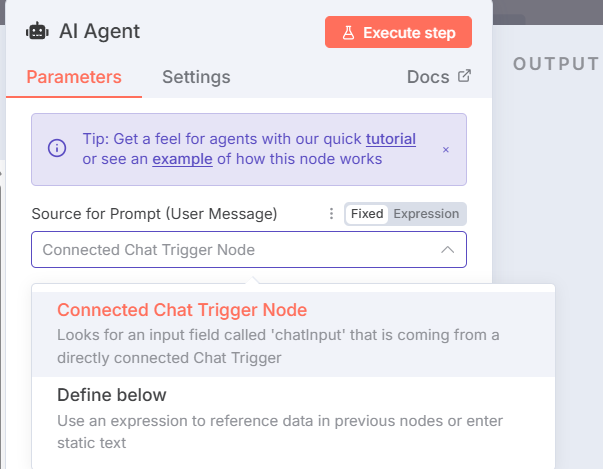
Then click on Fetch Test Result



Search for AI AGENT



Add it

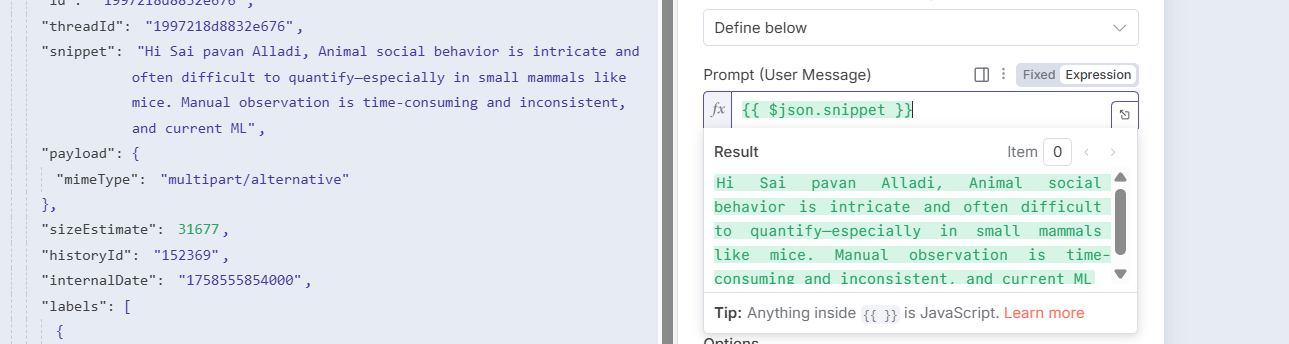


Click on define below

Change to expression

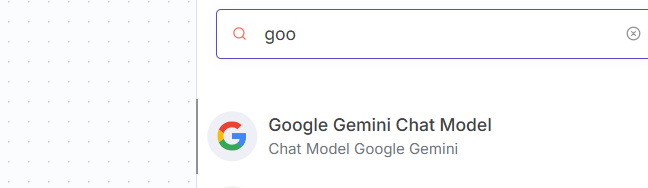
Drag the snippet on left side and keep it in Prompt

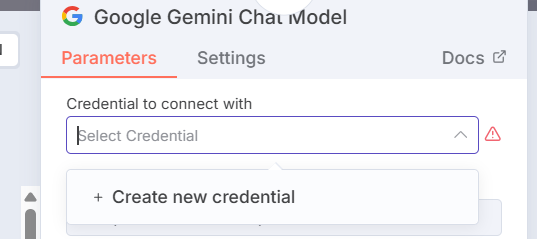
And you can give prompt like summarize and shorten it….



Connect the chat model

Search for Google Gemini Chat Model

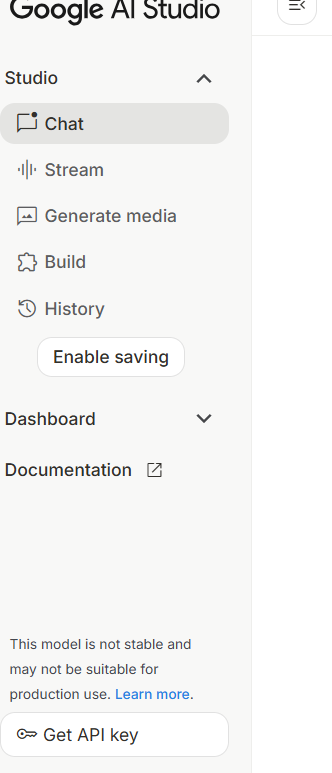




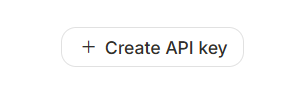
After clicking on create new credential you need to get API Key

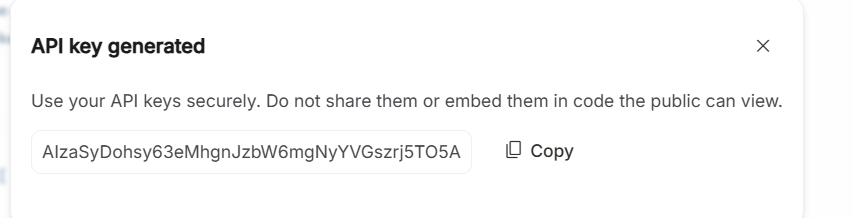
For getting API KEY you need to get it from Google AI Studio

1.Search for **Google AI Studio in chrome**

**2.** ****

Click on Get Api Key on left side





Paste the API Key in N8N and save

