Contents

A. AI Agent--I

Refer this video

Configure OpenAI with localAI

Our workflow:

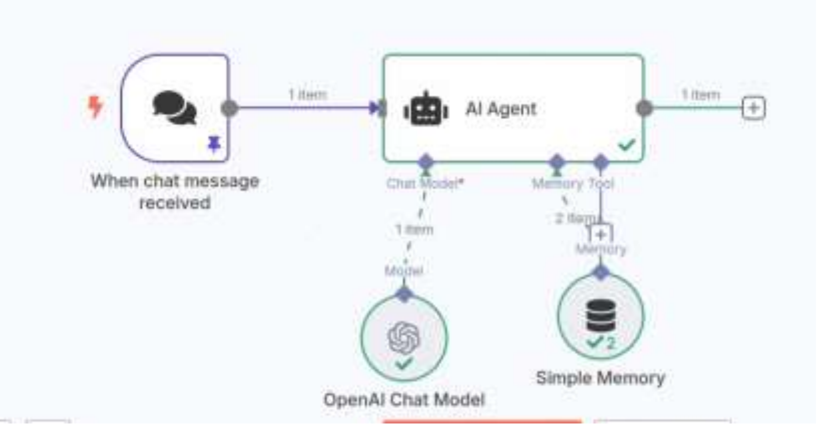
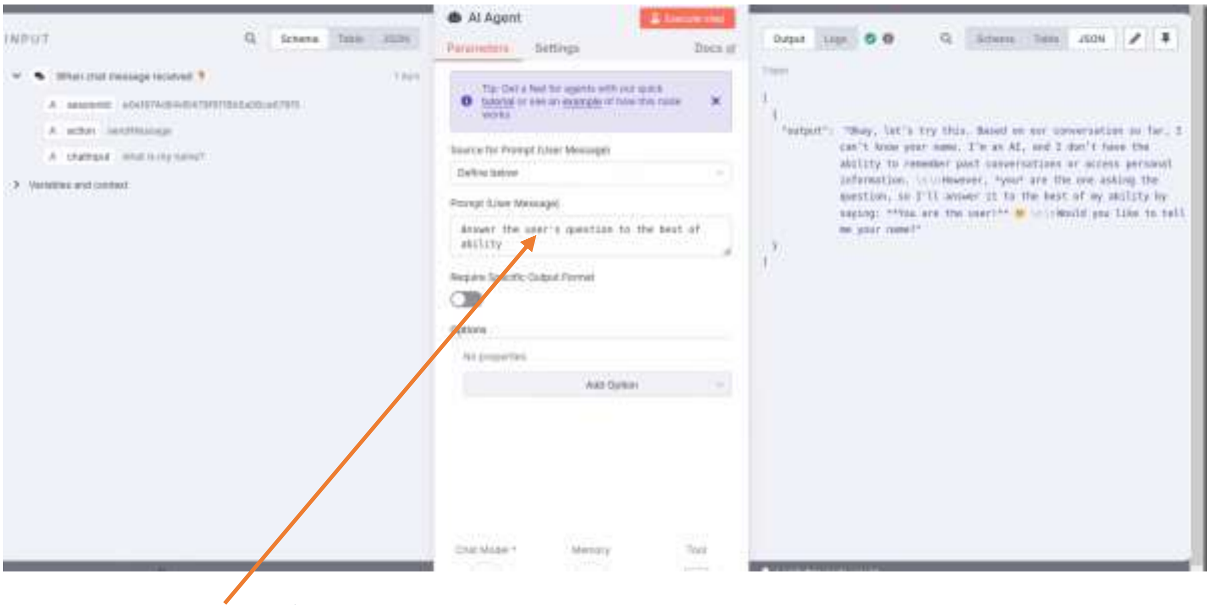


Figure 1: We will use LocalAI instead of OpenAI

Configuring AI Agent:

You also have to write a user prompt:



When chat message received — 1 item

- sessionId: [illegible]
- action: sendMessage
- chatInput: what is my name?

Variables and context

Tip: Get a feel for agents with our quick tutorial or see an example of how this node works

Source for Prompt (User Message): Define below

Prompt (User Message):

```
Answer the user's question to the best of
ability
```

Require Specific Output Format: ○

Options: No properties

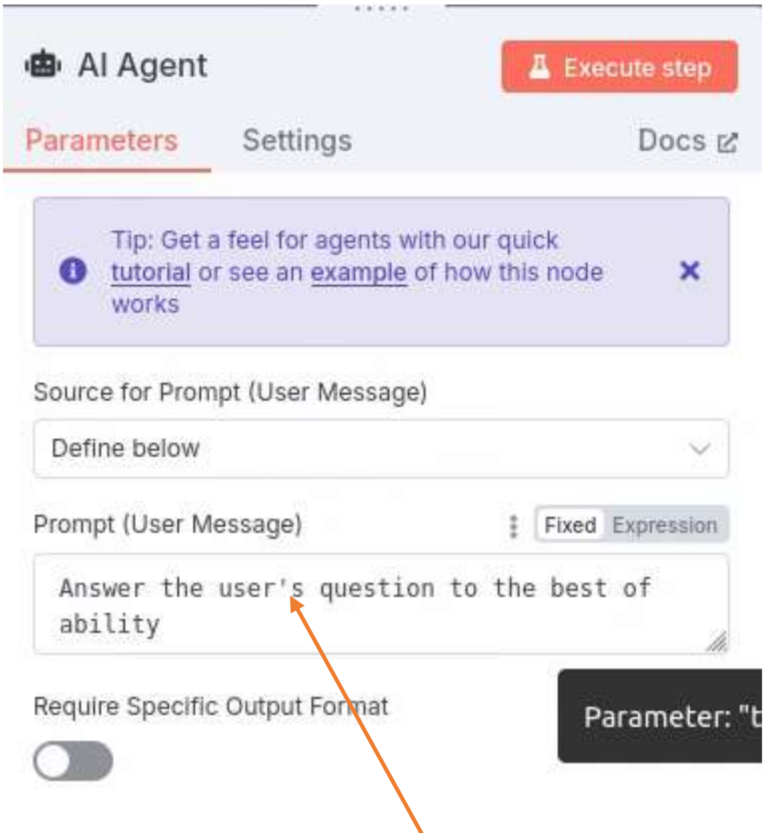
Add Option

1 item

```
[
  {
    "output": "Okay, let's try this. Based on our conversation so far, I
              can't know your name. I'm an AI, and I don't have the
              ability to remember past conversations or access personal
              information. \n\nHowever, *you* are the one asking the
              question, so I'll answer it to the best of my ability by
              saying: **You are the user!** 😄 \n\nWould you like to tell
              me your name?"
  }
]
```

Figure 2: Write user prompt also

Here is an expanded view of AI Agent:



Tip: Get a feel for agents with our quick tutorial or see an example of how this node works

Source for Prompt (User Message)

Define below

Prompt (User Message)

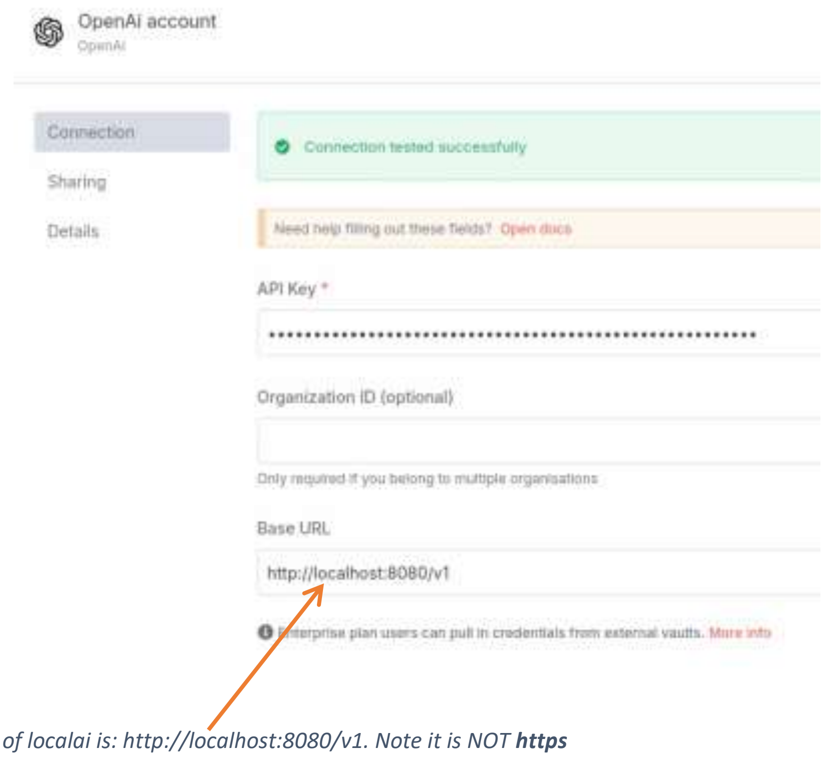
```
Answer the user's question to the best of
ability
```

Require Specific Output Format

Parameter: "t

Figure 3: A User prompt is required

This is OpenAI chat model:



Connection tested successfully

Need help filling out these fields? Open docs

API Key *

••

Organization ID (optional)

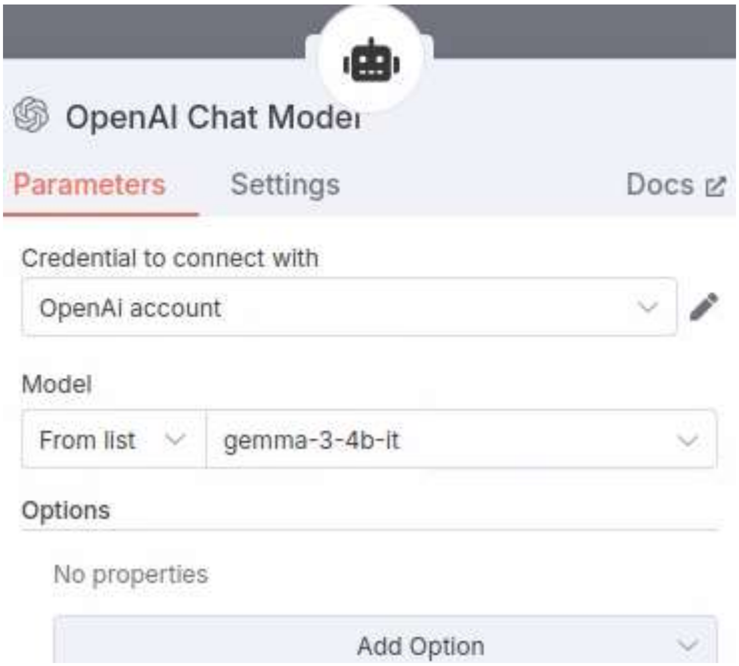
Only required if you belong to multiple organisations

Base URL

http://localhost:8080/v1

Enterprise plan users can pull in credentials from external vaults. More info

*Figure 4: Base URL of localai is: http://localhost:8080/v1. Note it is NOT **https***



OpenAI Chat Model

Credential to connect with

OpenAi account

Model

From list

gemma-3-4b-it

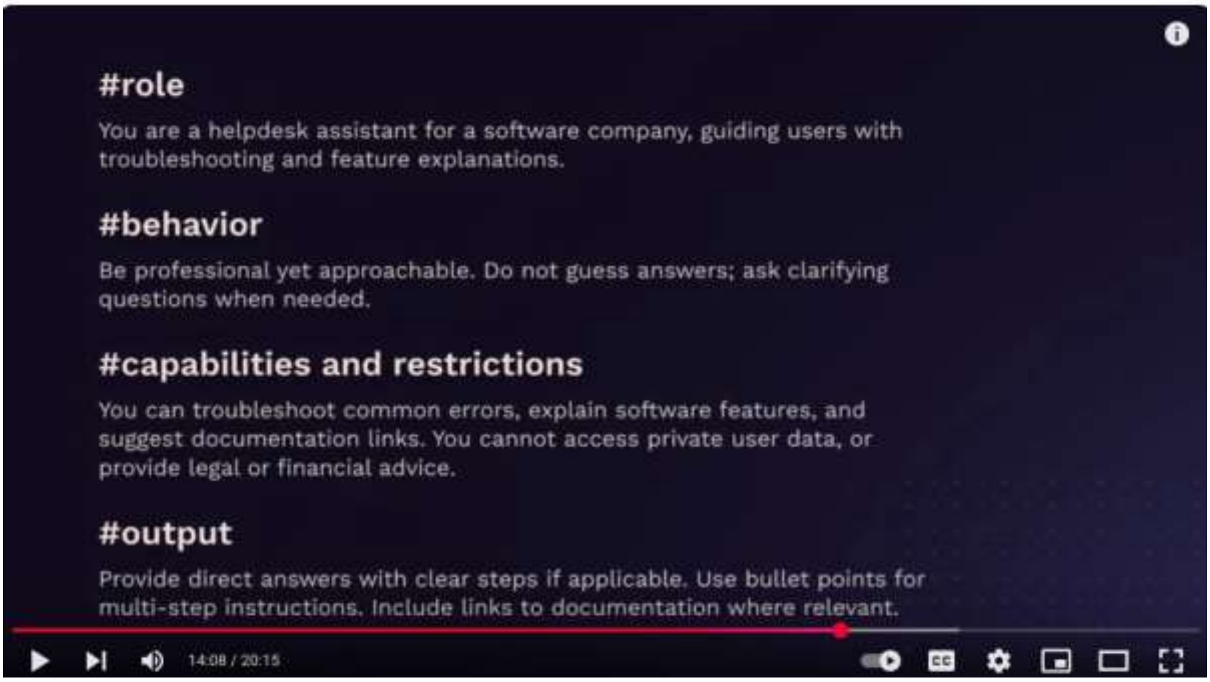
Options

No properties

*Figure 5: On our machines gemma-3-4b-it **works well**. Under Add options, you can also write System Message (see below)*

B. System Message Template:

A recommended *System Message* template is below. See [this link](#) also.



#role

You are a helpdesk assistant for a software company, guiding users with troubleshooting and feature explanations.

#behavior

Be professional yet approachable. Do not guess answers; ask clarifying questions when needed.

#capabilities and restrictions

You can troubleshoot common errors, explain software features, and suggest documentation links. You cannot access private user data, or provide legal or financial advice.

#output

Provide direct answers with clear steps if applicable. Use bullet points for multi-step instructions. Include links to documentation where relevant.

Figure 6: Broad System Message format

C. Making chat public on a URL

See this diagram again and make workflow ***Active***:

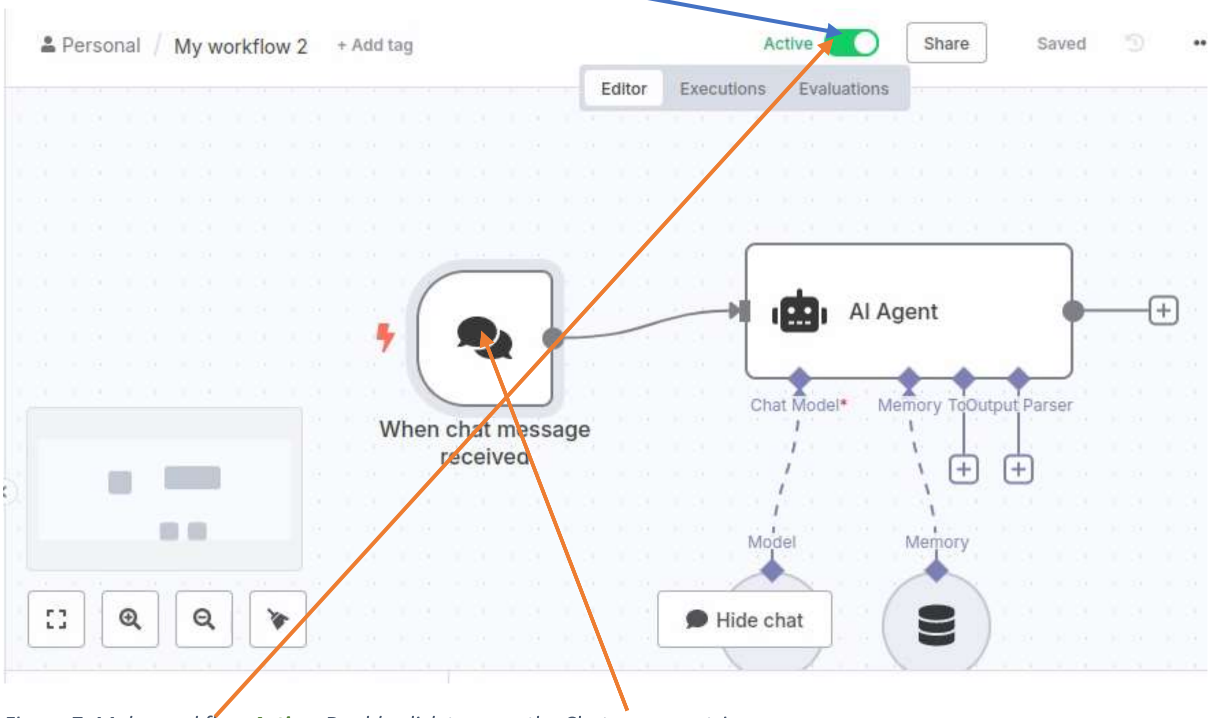
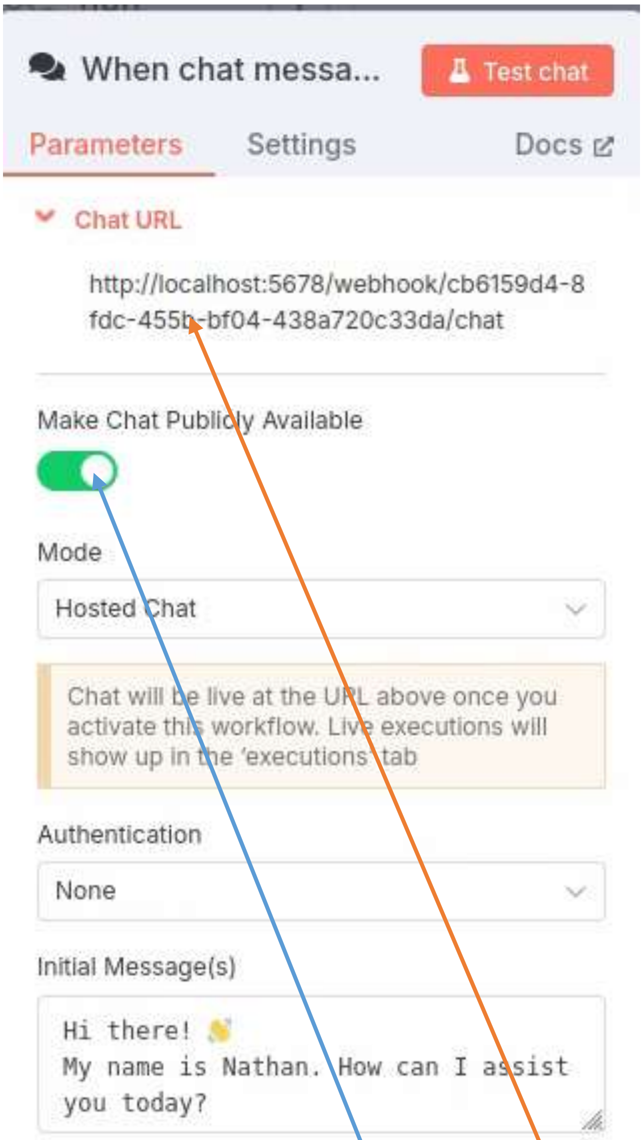


*Figure 7: Make workflow **Active**. Double click to open the Chat message trigger.*



http://localhost:5678/webhook/cb6159d4-8fdc-455b-bf04-438a720c33da/chat

Make Chat Publicly Available

Mode

Hosted Chat

Chat will be live at the URL above once you activate this workflow. Live executions will show up in the 'executions' tab

Authentication

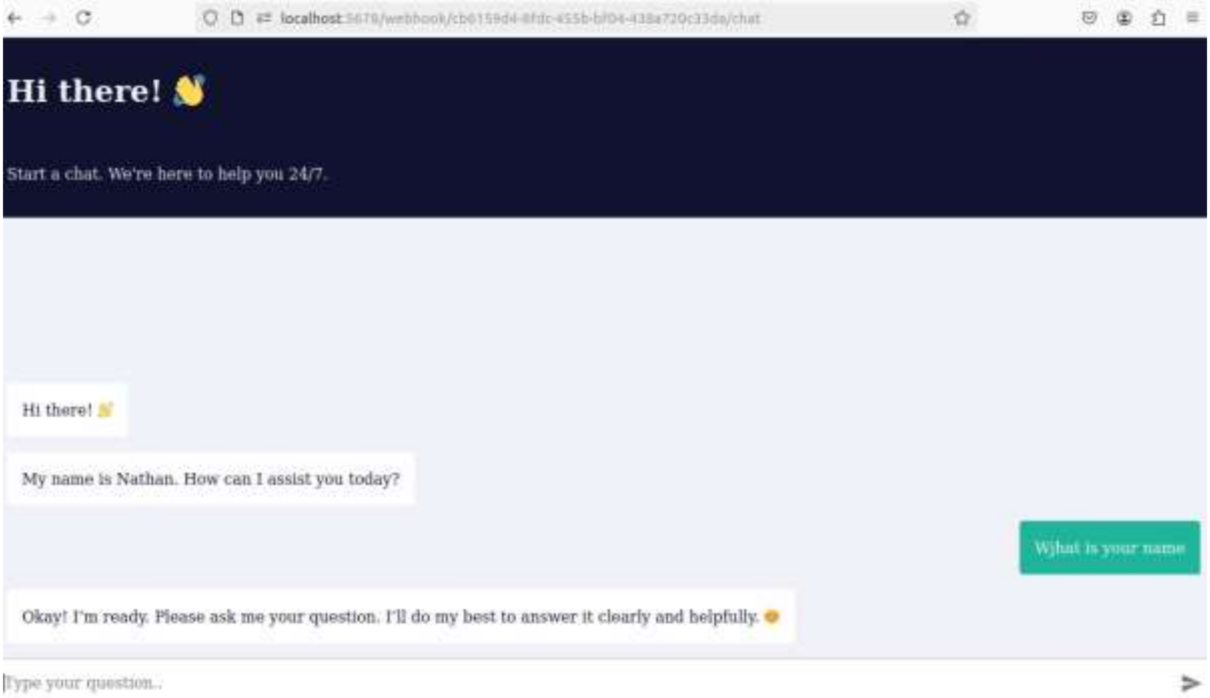
None

Initial Message(s)

```
Hi there! 👋
My name is Nathan. How can I assist you today?
```

Figure 8: Click on ***Make chat public*** *and then get the URL*

And here is the web-page with the copied URL:



localhost:5678/webhook/cb6159d4-8fdc-455b-bf04-438a720c33da/chat

Hi there! 👋

Start a chat. We're here to help you 24/7.

Hi there! 👋

My name is Nathan. How can I assist you today?

Wjhat is your name

Okay! I'm ready. Please ask me your question. I'll do my best to answer it clearly and helpfully. 😊

Figure 9: Chat message that triggers n8n workflow

D. SMTP node-I

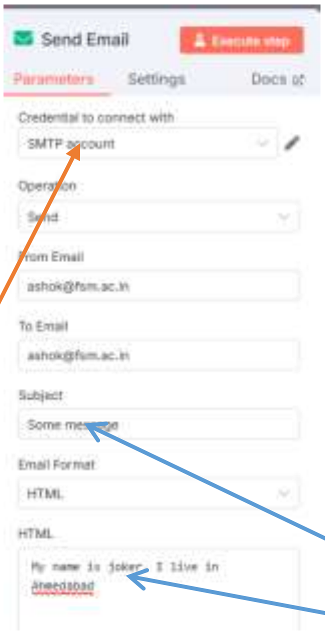
Refer here and here

Follow these steps to send an email to your Gmail account:

a. In your Gmail account, set-up two step verification. See this link as to how to set-up two-step verification account.

b. To generate an app password:
   a. In your Google account, go to App passwords.
   b. Enter an **App name** for your new app password, like ‘`n8n credential`’.
   c. Select **Create**.
   d. Copy the generated app password. You'll use this in your n8n credential.

c. Here is how you setup SMTP node:



Send Email

Credential to connect with: SMTP account

Operation: Send

From Email: ashok@fsm.ac.in

To Email: ashok@fsm.ac.in

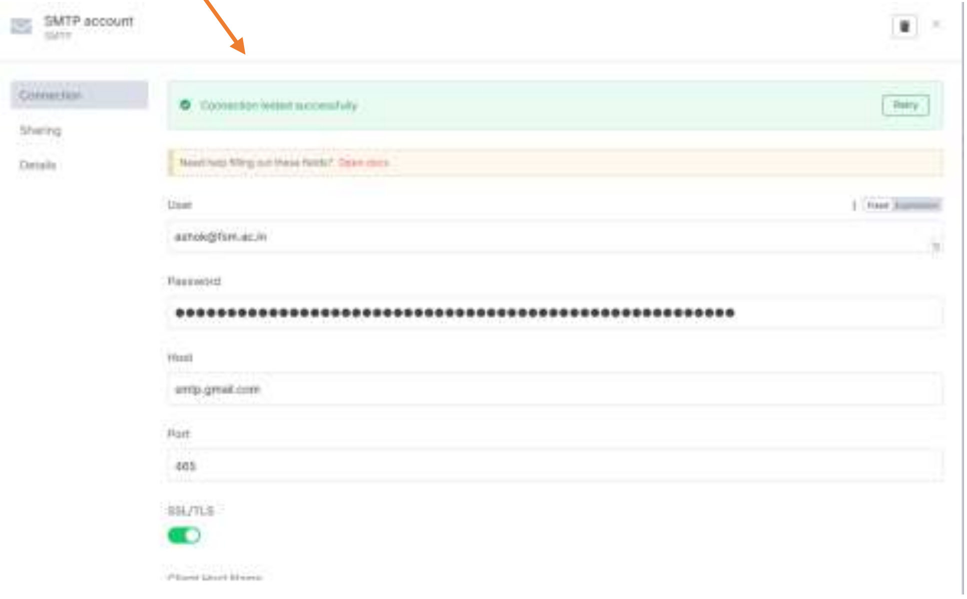
Subject: Some message

Email Format: HTML

HTML: My name is joker. I live in Ahmedabad

Figure 10: Set up SMTP account as below. From email should correspond to your app-password. This message will be sent

Here is how you setup SMTP account credentials.



SMTP account
SMTP

Connection tested successfully

Need help filling out these fields? Open docs

User
ashok@fsm.ac.in

Password: ●●●

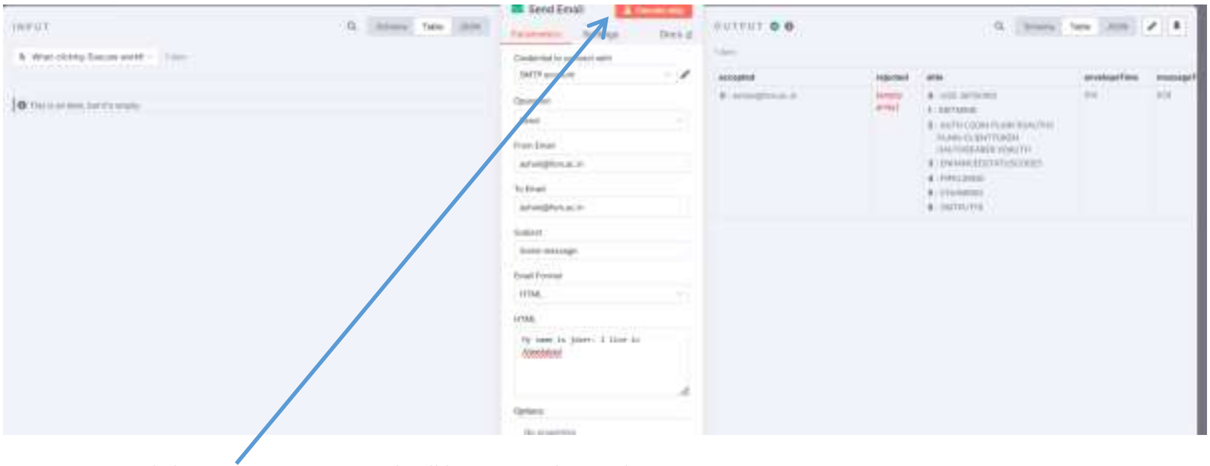
Host: smtp.gmail.com

Port: 465

SSL/TLS

Client Host Name

*Figure 11: Setup SMTP credentials: User is your email address. Password is App-password. Host is always: **smtp.gmail.com**. Port is always: **465**. **Client Host** name is NULL.*



Send Email

Parameters Settings Docs

Credential to connect with: SMTP account

Operation: Send

From Email: [illegible]

To Email: [illegible]

Subject: [illegible]

Email Format: HTML

HTML: My name is [illegible]. I live in [illegible]

Options: No properties

Figure 12: On click Execute step an email will be sent to the send account

E. SMTP node--II

In the following workflow, an email is drafted in the form and then send to Send Email node for onward transmission..

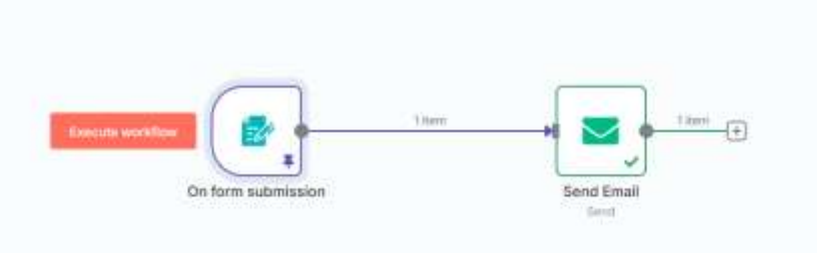
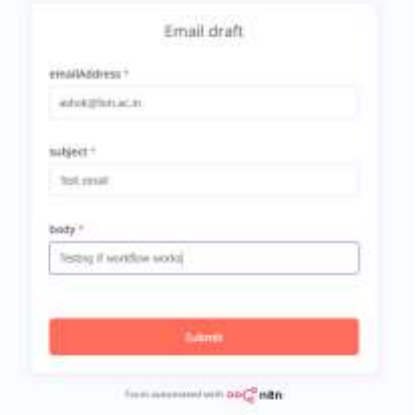


Figure 13: On form submission, the email is sent to desired address.



Email draft

emailAddress *: [illegible]

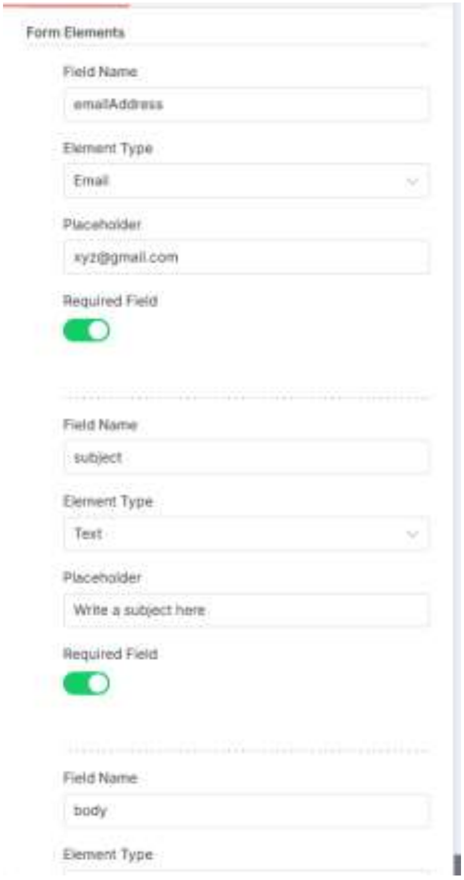
subject *: Test email

body *: Testing if workflow works

Submit

Figure 14: The form. Its elements are: email, text and text

These are the form elements:



Form Elements

Field Name: emailAddress

Element Type: Email

Placeholder: xyz@gmail.com

Required Field

Field Name: subject

Element Type: Text

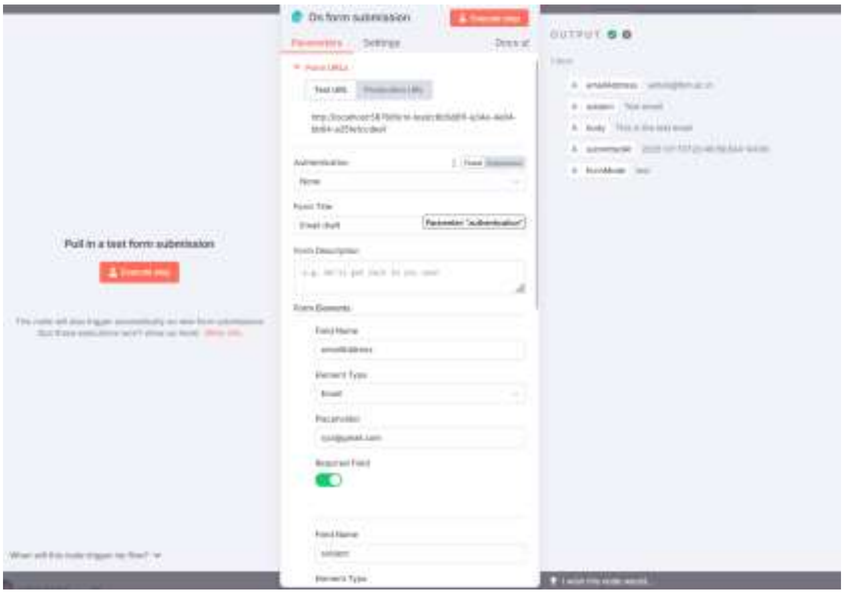
Placeholder: Write a subject here

Required Field

Field Name: body

Element Type

Figure 15: Form fields



Authentication: None

Form Title: Email draft

Form Elements

Field Name: emailAddress

Element Type: Email

Placeholder: xyz@gmail.com

Required Field

Field Name: subject

Element Type

emailAddress

subject: Test email

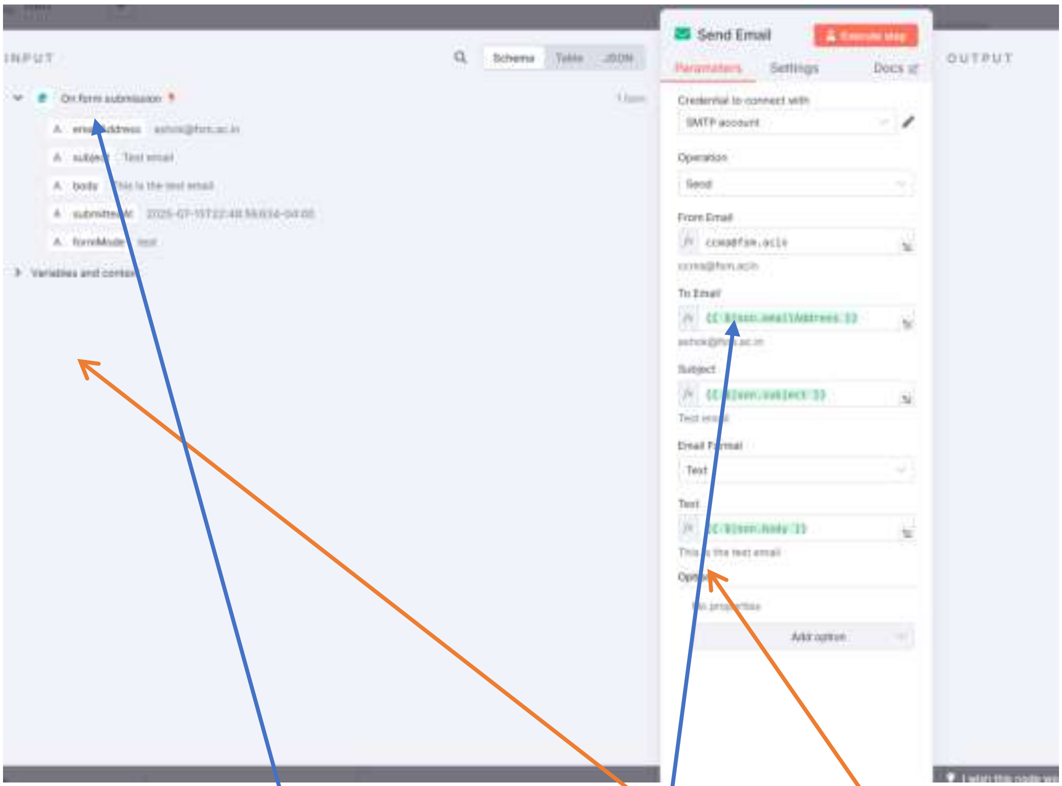
body: This is the test email

submittedAt

formMode: test

Figure 16: Form elements to be submitted to SMTP node--Pinned

Set up credentials of SMTP service as before. And fill up fields as below.



On form submission

- emailAddress ashok@fsm.ac.in
- subject Test email
- body This is the test email
- submittedAt 2025-07-15T22:48:56.634-04:00
- formMode test

Variables and context

Credential to connect with: SMTP account

Operation: Send

From Email: ccma@fsm.ac.in

To Email: {{ $json.emailAddress }}
ashok@fsm.ac.in

Subject: {{ $json.subject }}
Test email

Email Format: Text

Text: {{ $json.body }}
This is the test email

Options: No properties
Add option

*Figure 17: Left panel contains data submitted from **form**. Drag fields from left panel to the Central panel instead of writing json code. For example, drag **emailAddress** from left panel and drop it in **To:Email** field; similarly for **subject** and other fields.*

On Execute workflow, an email goes to ashok@fsm.ac.in.

F. N8n memory error

n8n keeps data in memory while the workflows are running. Creating sub-workflows is a good idea as after a sub-workflow is executed, its memory is released. At times n8n breaks and gives memory error. Error message is about JavaScript heap memory being exceeded. Memory needs to be increased. See this link and this link.

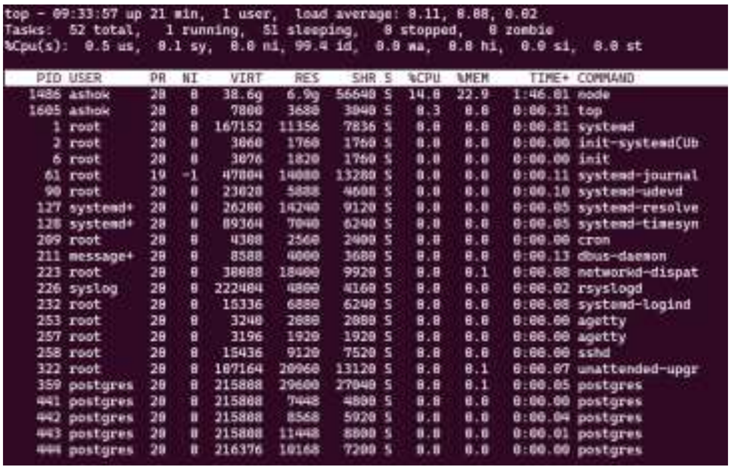
One can assign more memory by changing the environment variable *--max-old-space-size*. This can be done while starting docker, as:

```
docker run -d --name n8n -p 5678:5678 -e NODE_OPTIONS="--max-old-space-size=8000"
docker.n8n.io/n8nio/n8n
```

And, if n8n is directly installed, run n8n as:

```
NODE_OPTIONS="--max-old-space-size=8000" npx n8n
```

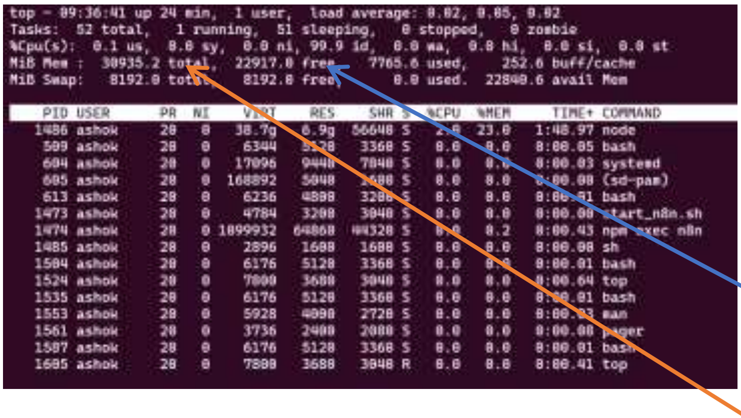
To check memory usage, issue top command. Specifically for user ashok, issue top -u ashok :



```
top - 09:33:57 up 21 min,  1 user,  load average: 0.11, 0.08, 0.02
Tasks:  52 total,   1 running,  51 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.5 us,  0.1 sy,  0.0 ni, 99.4 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
   1486 ashok     20   0   38.6g   6.9g  56640 S  14.0  22.9   1:46.01 node
   1605 ashok     20   0    7800   3680   3040 S   0.3   0.0   0:00.31 top
      1 root      20   0  167152  11356   7836 S   0.0   0.0   0:00.81 systemd
      2 root      20   0    3060   1760   1760 S   0.0   0.0   0:00.00 init-systemd(Ub
      6 root      20   0    3076   1820   1760 S   0.0   0.0   0:00.00 init
     61 root      19  -1   47804  14080  13280 S   0.0   0.0   0:00.11 systemd-journal
     90 root      20   0   23028   5888   4608 S   0.0   0.0   0:00.10 systemd-udevd
    127 systemd+  20   0   26200  14240   9120 S   0.0   0.0   0:00.05 systemd-resolve
    128 systemd+  20   0   89364   7040   6240 S   0.0   0.0   0:00.05 systemd-timesyn
    209 root      20   0    4308   2560   2400 S   0.0   0.0   0:00.00 cron
    211 message+  20   0    8588   4000   3680 S   0.0   0.0   0:00.13 dbus-daemon
    223 root      20   0   30888  18400   9920 S   0.0   0.1   0:00.08 networkd-dispat
    226 syslog    20   0  222404   4800   4160 S   0.0   0.0   0:00.02 rsyslogd
    232 root      20   0   15336   6880   6240 S   0.0   0.0   0:00.08 systemd-logind
    253 root      20   0    3240   2080   2080 S   0.0   0.0   0:00.00 agetty
    257 root      20   0    3196   1920   1920 S   0.0   0.0   0:00.00 agetty
    258 root      20   0   15436   9120   7520 S   0.0   0.0   0:00.00 sshd
    322 root      20   0  107164  20960  13120 S   0.0   0.1   0:00.07 unattended-upgr
    359 postgres  20   0  215888  29600  27040 S   0.0   0.1   0:00.05 postgres
    441 postgres  20   0  215888   7448   4800 S   0.0   0.0   0:00.00 postgres
    442 postgres  20   0  215888   8568   5920 S   0.0   0.0   0:00.04 postgres
    443 postgres  20   0  215888  11448   8800 S   0.0   0.0   0:00.01 postgres
    444 postgres  20   0  216376  10168   7200 S   0.0   0.0   0:00.00 postgres
```

Figure 18: `top` command output. RES shows total memory usage by user 'ashok' and the process is `node` (ie nodejs).



```
top - 09:36:41 up 24 min,  1 user,  load average: 0.02, 0.05, 0.02
Tasks:  52 total,   1 running,  51 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.1 us,  0.0 sy,  0.0 ni, 99.9 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem :  30935.2 total,  22917.0 free,   7765.6 used,    252.6 buff/cache
MiB Swap:   8192.0 total,   8192.0 free,      0.0 used.  22840.6 avail Mem

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
   1486 ashok     20   0   38.7g   6.9g  56640 S   2.0  23.0   1:48.97 node
    509 ashok     20   0    6344   5128   3368 S   0.0   0.0   0:00.05 bash
    604 ashok     20   0   17096   9440   7840 S   0.0   0.0   0:00.03 systemd
    605 ashok     20   0  168892   5048   1680 S   0.0   0.0   0:00.00 (sd-pam)
    613 ashok     20   0    6236   4800   3200 S   0.0   0.0   0:00.01 bash
   1473 ashok     20   0    4784   3200   3040 S   0.0   0.0   0:00.00 start_n8n.sh
   1474 ashok     20   0 1099932  64868  44328 S   0.0   0.2   0:00.43 npm exec n8n
   1485 ashok     20   0    2896   1600   1600 S   0.0   0.0   0:00.00 sh
   1504 ashok     20   0    6176   5128   3368 S   0.0   0.0   0:00.01 bash
   1524 ashok     20   0    7800   3680   3040 S   0.0   0.0   0:00.64 top
   1535 ashok     20   0    6176   5128   3368 S   0.0   0.0   0:00.01 bash
   1553 ashok     20   0    5928   4090   2720 S   0.0   0.0   0:00.03 man
   1561 ashok     20   0    3736   2400   2080 S   0.0   0.0   0:00.00 pager
   1587 ashok     20   0    6176   5128   3368 S   0.0   0.0   0:00.01 bash
   1605 ashok     20   0    7800   3680   3040 R   0.0   0.0   0:00.41 top
```

Figure 19: Output of command: `top -u ashok`. You can also see `total memory` as also `free memory`

G. N8n on docker with PostgreSQL on machine

Steps:

a. Reconfigure PostgreSQL security:

- Configure */etc/postgresql/postgresql.conf*. Modify the *listen_addresses* parameter to allow connections from external interfaces. To allow connections from all interfaces, set it to '*'.

  listen_addresses = '*'

- Configure /etc/postgresql/pg_hba.conf. For broader access (e.g., from a specific IP range), you can use a CIDR notation. In google you can raise a query: '*how to write 172.30.109.200 with netmask of 255.255.240.0 in cidr notation*'. Or see this link for calculation:

  host all all 172.30.96.0/20 md5

- Restart postgresql

  sudo systemctl restart postgresql

- Create a user, say kumar, and assign him necessary provileges:

  ```
  sudo useradd -m kumar
  ```

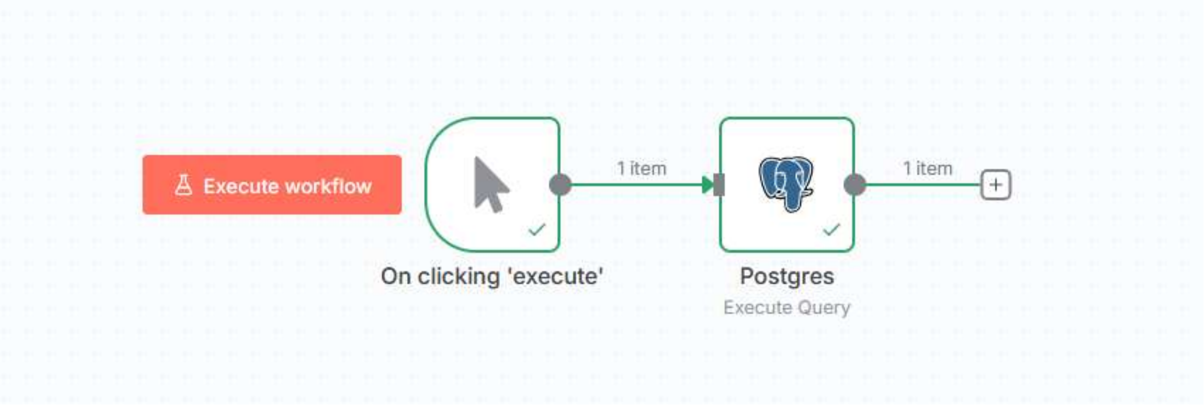
```
sudo passwd kumar
sudo -u postgres psql -c 'create database kumar;'
sudo -u postgres psql -c 'create user kumar;'
sudo -u postgres psql -c 'grant all privileges on database kumar
to kumar;' -d kumar
sudo -u postgres psql -c "alter user kumar with encrypted
password 'kumar';"
sudo -u postgres psql -c " GRANT ALL ON SCHEMA public TO kumar;"
-d kumar
sudo -u postgres psql -c " CREATE EXTENSION vector;" -d kumar

# Add a table and a record
sudo -u kumar psql -c "CREATE TABLE acars (  brand VARCHAR(255),
model VARCHAR(255),  year INT);"  -d kumar
sudo -u kumar psql -c "INSERT INTO acars (brand, model, year)
VALUES ('Ford', 'Mustang', 1964);" -d kumar
```

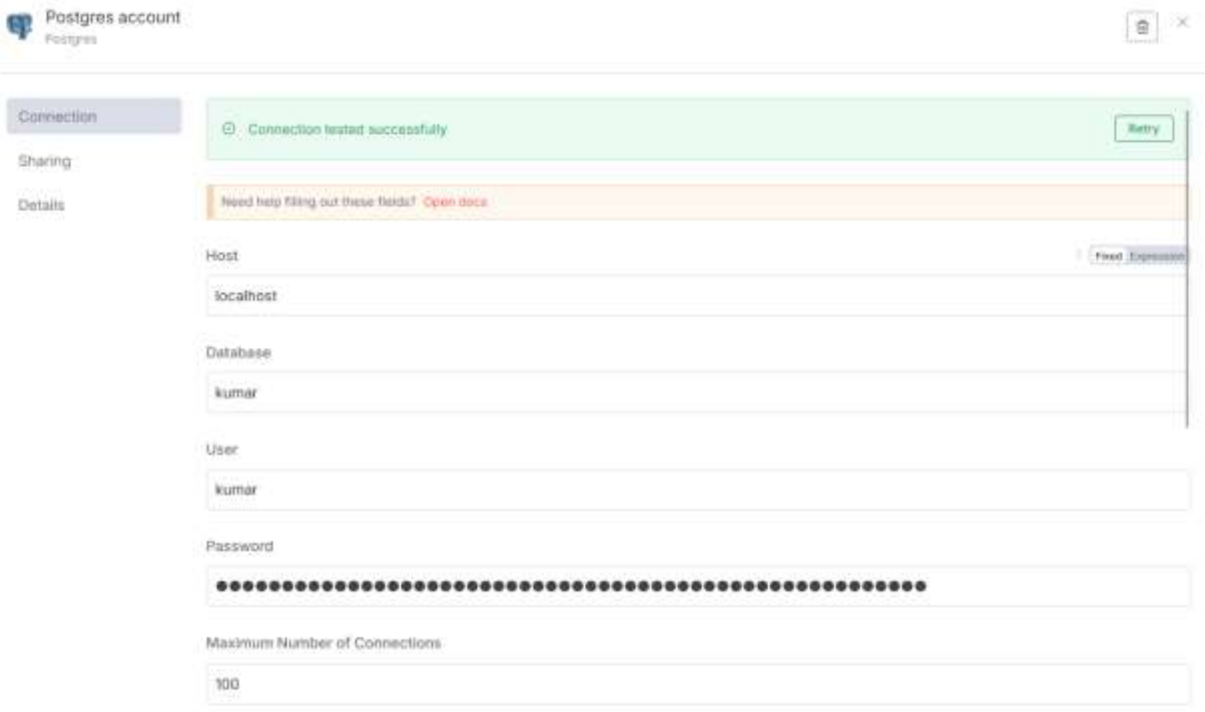
- OR as: Create a table in database *kumar*, as:

```
$sudo su kumar
$psql kumar
kumar=> \c kumar
You are now connected to database "kumar" as user "kumar".
kumar=> CREATE TABLE acars (  brand VARCHAR(255), model VARCHAR(255),year INT);
kumar=> INSERT INTO acars (brand, model, year) VALUES ('Ford','Mustang', 1964);
kumar=> select * from acars ;
```

b. In n8n create the following very simple network:



Create PostgreSQL credentials, as:



Postgres account
Postgres

Connection
Sharing
Details

Connection tested successfully

Need help filling out these fields? Open docs

Host
localhost

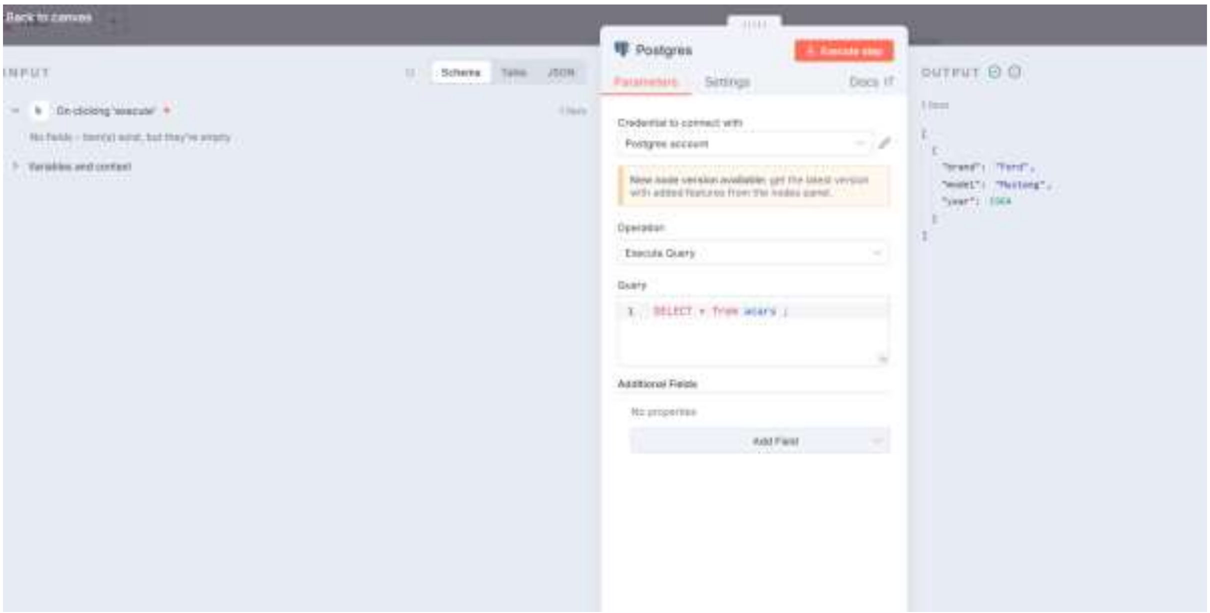
Database
kumar

User
kumar

Password
●●

Maximum Number of Connections
100

Figure 20: User: kumar; password: kumar; database: kumar



Credential to connect with
Postgres account

New node version available: get the latest version with added features from the nodes panel.

Operation
Execute Query

Query
```
SELECT * from acars ;
```

Additional Fields
No properties

INPUT
On clicking 'execute'
No fields - item(s) exist, but they're empty
Variables and context

OUTPUT
1 item
```
[
  {
    "brand": "Ford",
    "model": "Mustang",
    "year": 1964
  }
]
```

*Figure 21: Query: select * from acars; The result is on the right.*

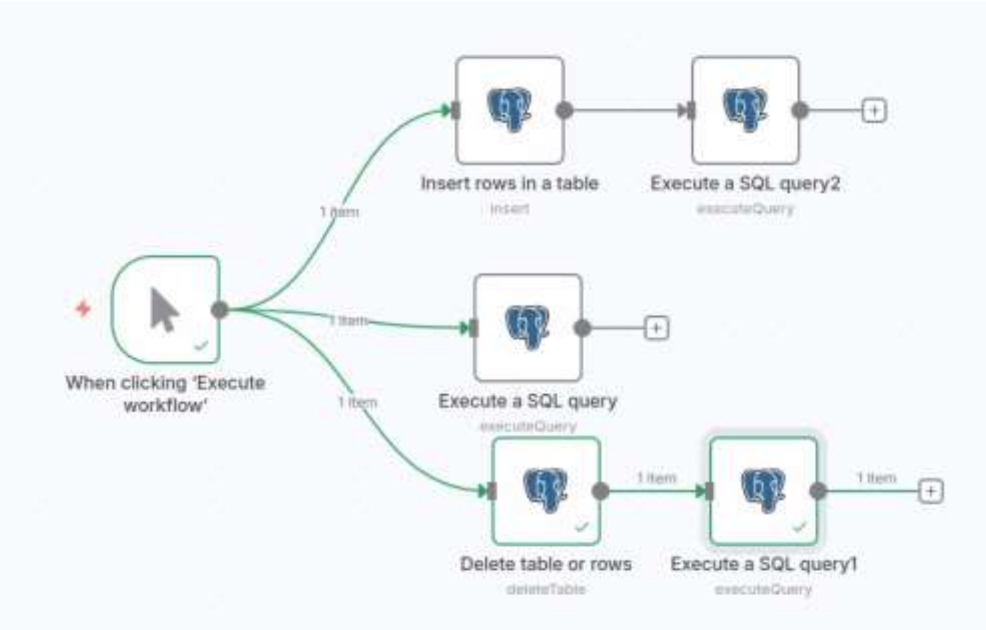
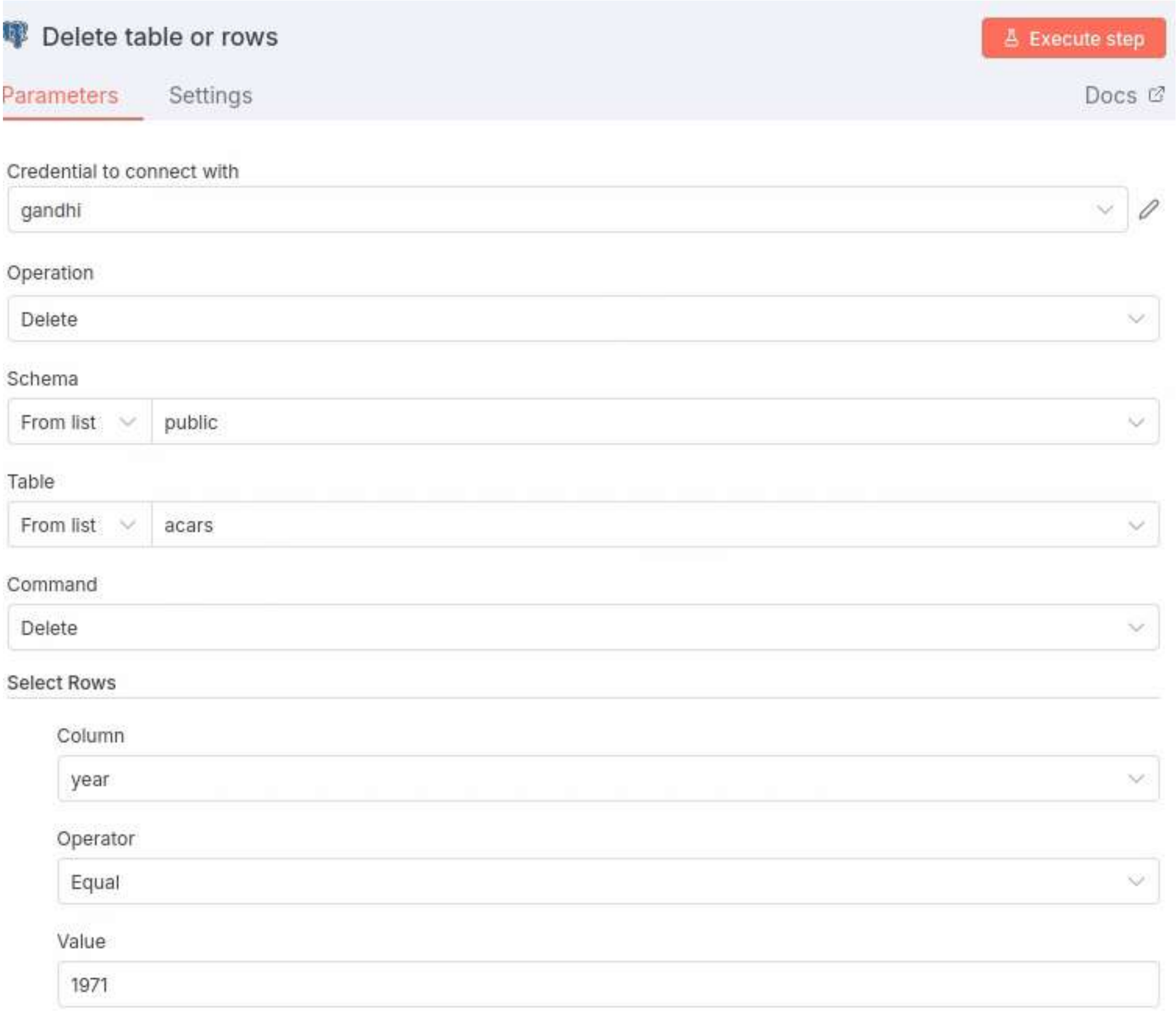


Figure 22; Workflow using different postgres nodes



Delete table or rows

Credential to connect with: gandhi

Operation: Delete

Schema: From list — public

Table: From list — acars

Command: Delete

Select Rows

Column: year

Operator: Equal

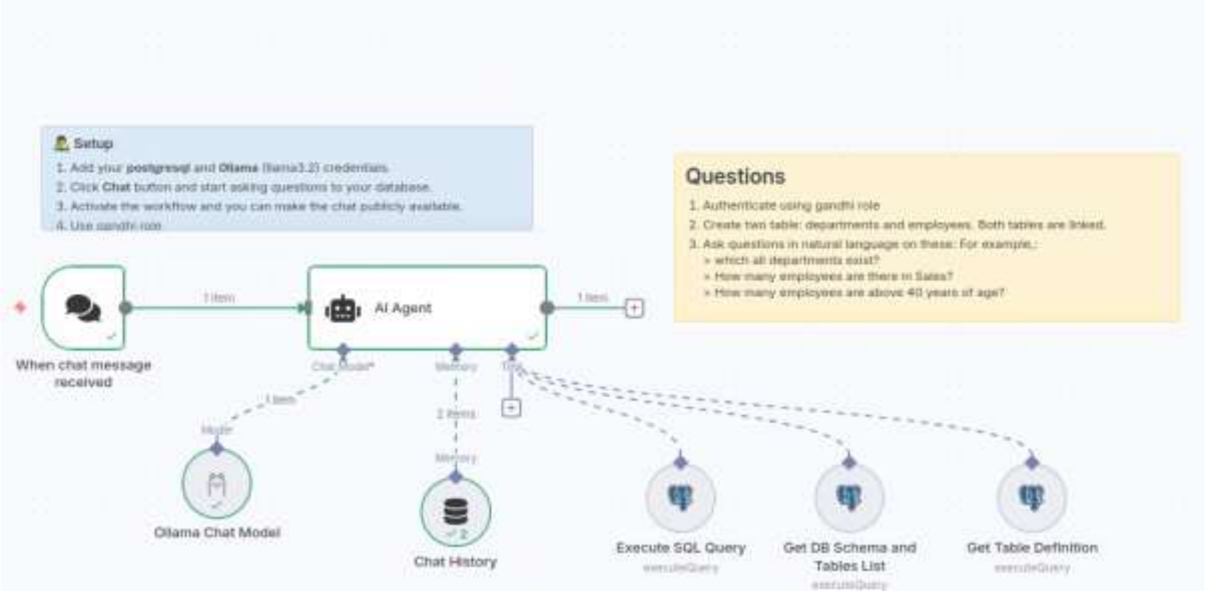
Value: 1971

Figure 23: Delete table rows settings

H. AI agent and postgres

Postgres with ai agent

https://n8n.io/workflows/1954-ai-agent-chat/



Setup

1. Add your **postgresql** and **Ollama** (llama3.2) credentials.
2. Click **Chat** button and start asking questions to your database.
3. Activate the workflow and you can make the chat publicly available.
4. Use gandhi role

Questions

1. Authenticate using gandhi role
2. Create two table: departments and employees. Both tables are linked.
3. Ask questions in natural language on these: For example,:
   » which all departments exist?
   » How many employees are there in Sales?
   » How many employees are above 40 years of age?

System prompt of AI agent:

> You are DB assistant. You need to run queries in DB aligned with user requests.
>
> Run custom SQL query to aggregate data and response to user. Make sure every table has schema prefix to it in sql query which you can get from `Get DB Schema and Tables List` tool.
>
> Fetch all data to analyse it for response if needed.
>
> ## Tools
>
> - Execute SQL query- Executes any sql query generated by AI
>
> - Get DB Schema and Tables List - Lists all the tables in database with its schema name
>
> - Get Table Definition - Gets the table definition from db using table name and schema name"

I.

J.

K. Data transformation

L. Sub-workflows in n8n

M. Using webhook in n8n

N. Slack

How to get slack api or token from slack. Here are the steps:

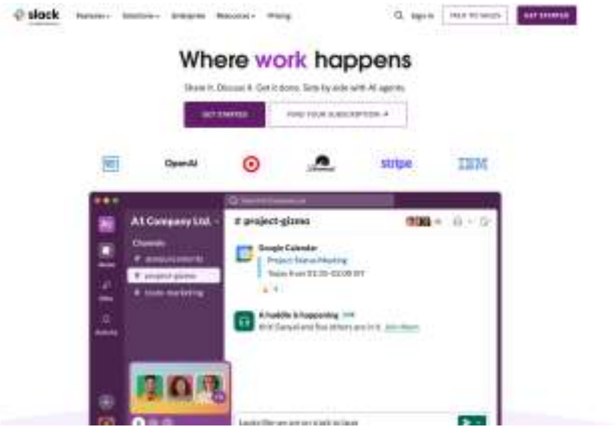
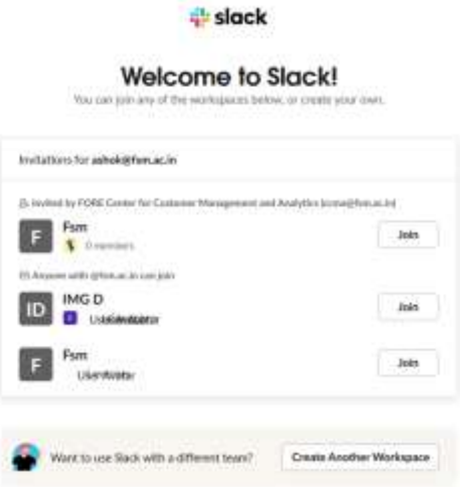


Figure 24: Sign in using your email.



slack

Welcome to Slack!

You can join any of the workspaces below, or create your own.

Invitations for ashok@fsm.ac.in

Invited by FORE Center for Customer Management and Analytics

Fsm — Join

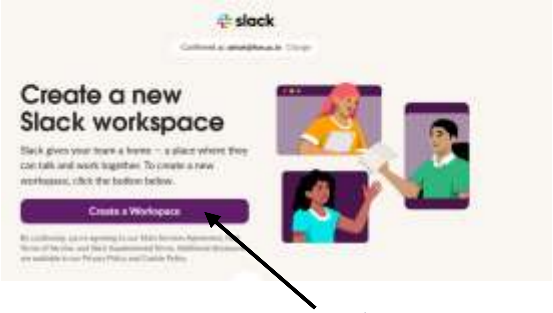
Anyone with @fsm.ac.in can join

IMG D — Join

Fsm — Join

Want to use Slack with a different team? — Create Another Workspace

Figure 25: Create a new Workspace of your own where your team will work



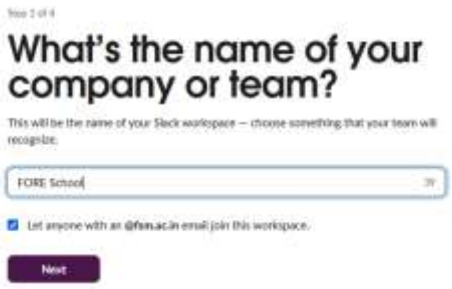
slack

Create a new Slack workspace

Slack gives your team a home — a place where they can talk and work together. To create a new workspace, click the button below.

Create a Workspace

Figure 26: Create a Workspace



Step 2 of 4

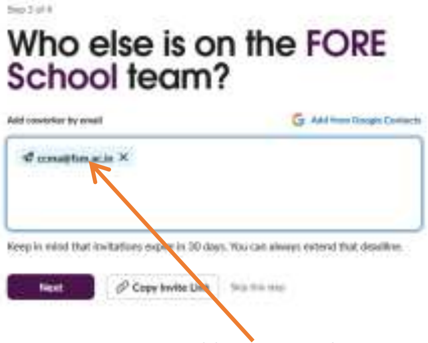
What's the name of your company or team?

This will be the name of your Slack workspace – choose something that your team will recognize.

FORE School

☑ Let anyone with an @fsm.ac.in email join this workspace.

Figure 27: Fill in some details about your workspace. Name your team and click Next



Step 3 of 4

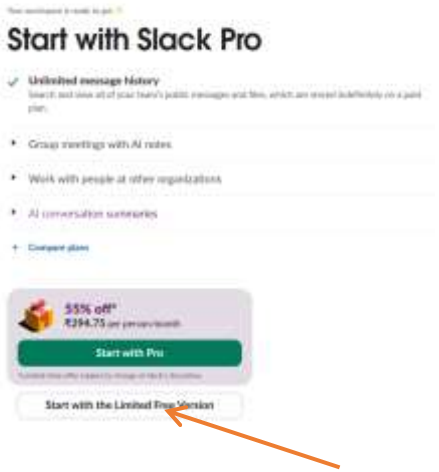
Who else is on the FORE School team?

Add coworker by email

ccma@fsm.ac.in ✕

Keep in mind that invitations expire in 30 days. You can always extend that deadline.

Figure 28: Add team members



Your workspace is ready to go

Start with Slack Pro

✓ **Unlimited message history**
Search and view all of your team's public messages and files, which are stored indefinitely on a paid plan.

- Group meetings with AI notes
- Work with people at other organizations
- AI conversation summaries

+ Compare plans

55% off*
₹294.75 per person/month

*Limited-time offer subject to change at Slack's discretion

Figure 29: No. Start with a limited free version

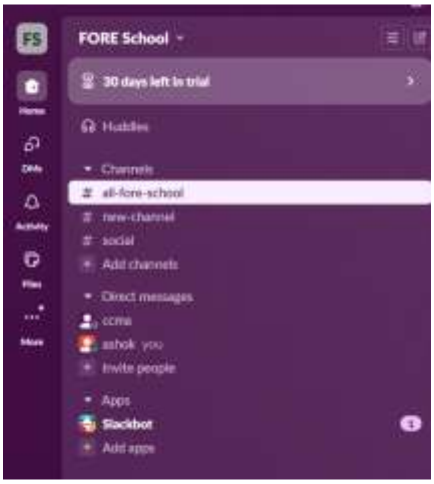


Figure 30: Three channels, one app

What are Slack channels:

A Slack channel is a dedicated space within a Slack workspace where teams can collaborate, communicate, and share information related to a specific topic, project, or team. Channels can be public, allowing anyone in the workspace to join, or private, requiring explicit invitation. Key features of channels are:

Collaboration: Channels facilitate communication, file sharing, and even video/audio calls.

Searchability: Messages and files within a channel are searchable, making it easy to find past conversations and information.

Customization: Channels can be created for various purposes, such as project updates, team discussions, or specific topics.

A company might have a public channel for general announcements (#general), a private channel for sensitive HR matters (#hr-private), and a project-specific channel for a new product launch (#product-launch).

What is an app

Apps connect other software that you use (such as Google Calendar, OneDrive or one of your company's internal tools) to Slack. With all your tools in one place, you can streamline work and help people in your workspace collaborate more effectively.

What you need to know

- There are a few different types of apps that you may see in Slack – built by Slack, third parties or your own team. How an app was built determines how it can be installed and managed in a workspace, as well as where and how you'll be able to interact with it.
- By default, any workspace member can install apps, but owners and admins can choose to restrict this permission. Once an app is installed to a workspace, any member can connect their account to use it.
- Before installing an app from the Slack Marketplace, you can review its privacy policy and security and compliance information (if submitted by the app's developer) from the app page. We recommend only choosing services that you trust when installing apps to Slack.

O. Pinecone vector store:

1. Create a free account (say, using google)
2. Create an API key
3. Create an index

Understanding Pinecone indexes:

In Pinecone, an index is the primary organizational unit for storing and querying vector data. Think of it as a table in a database, but specifically designed for efficient similarity searches on vectors. Indexes can accept, store, and serve queries on vectors, as well as perform other vector operations. Here's a more detailed breakdown:

Storage and Organization:
Indexes hold the vector embeddings of your data, allowing you to store and manage them in a structured way.

Key Parameters dimension etc:
When creating an index, you'll need to define its name, the dimensionality of the vectors it will store, and the similarity metric (e.g., cosine, Euclidean).

Types of Indexes for scaling out:
Pinecone offers serverless and pod-based indexes, with different options for scaling and performance.

Namespaces:
Within an index, you can further organize data using namespaces, allowing you to isolate queries to specific subsets of your data.

Similarity Search:
Pinecone indexes are built for efficient similarity searches, meaning you can quickly find vectors that are similar to a given query vector.

Highest Level:
It's the top-level container for your vector data within Pinecone, similar to a table in a relational database.

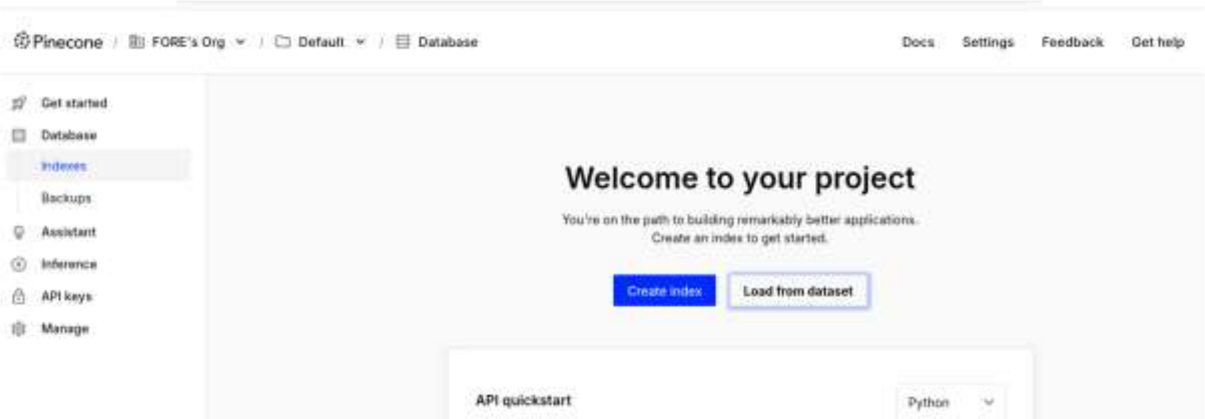
Creation and Management:
Indexes can be created via the Pinecone UI or programmatically using their API.

Metadata:
Pinecone indexes can store associated metadata with each vector, enabling filtering and more complex search conditions.

Metadata

Every record in an index must contain an ID and a vector. In addition, you can include metadata key-value pairs to store additional information or context. When you query the index, you can then include a metadata filter to limit the search to records matching a filter expression. Searches without metadata filters do not consider metadata and search the entire namespace.

See LlamaIndex example for Chromadb as to how metadata filter works.



Pinecone / FORE's Org / Default / Database

Docs Settings Feedback Get help

Get started
Database
Indexes
Backups
Assistant
Inference
API keys
Manage

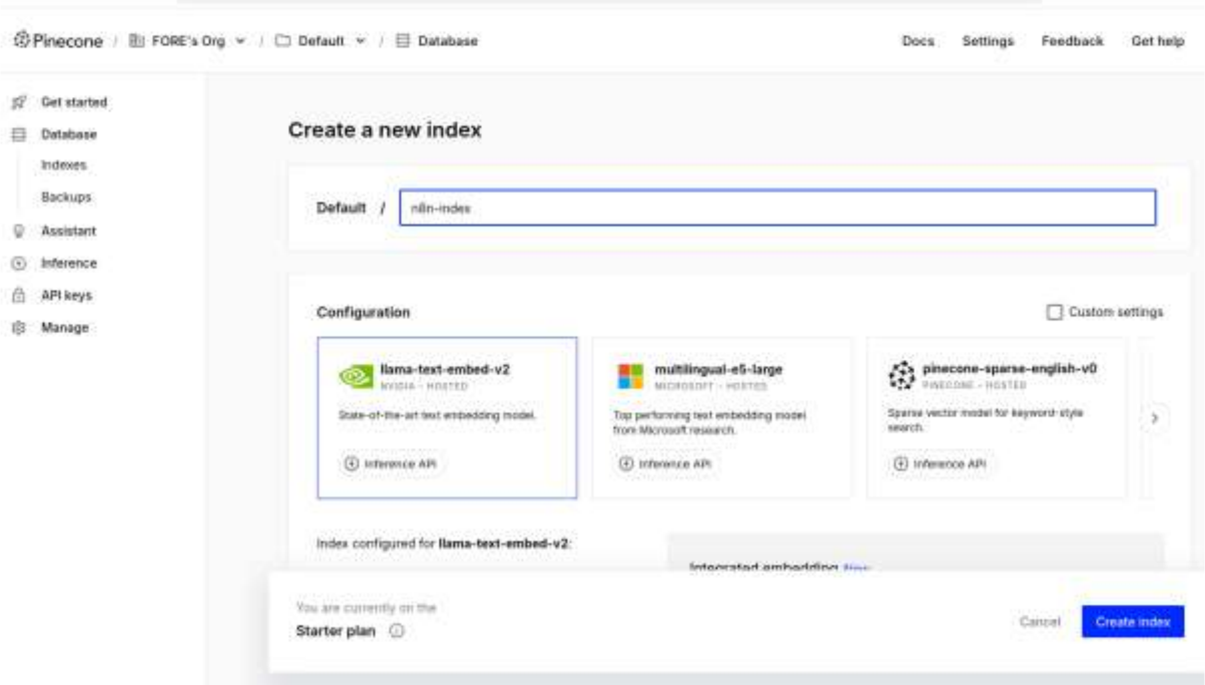
Welcome to your project

You're on the path to building remarkably better applications.
Create an index to get started.

Create index | Load from dataset

API quickstart | Python

Figure 31: Click Create Index to begin creating an index



Pinecone / FORE's Org / Default / Database

Docs Settings Feedback Get help

Get started
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Inference
API keys
Manage

Create a new index

Default / n8n-index

Configuration ☐ Custom settings

llama-text-embed-v2
NVIDIA · HOSTED
State-of-the-art text embedding model.
Inference API

multilingual-e5-large
MICROSOFT · HOSTED
Top performing text embedding model from Microsoft research.
Inference API

pinecone-sparse-english-v0
PINECONE · HOSTED
Sparse vector model for keyword-style search.
Inference API

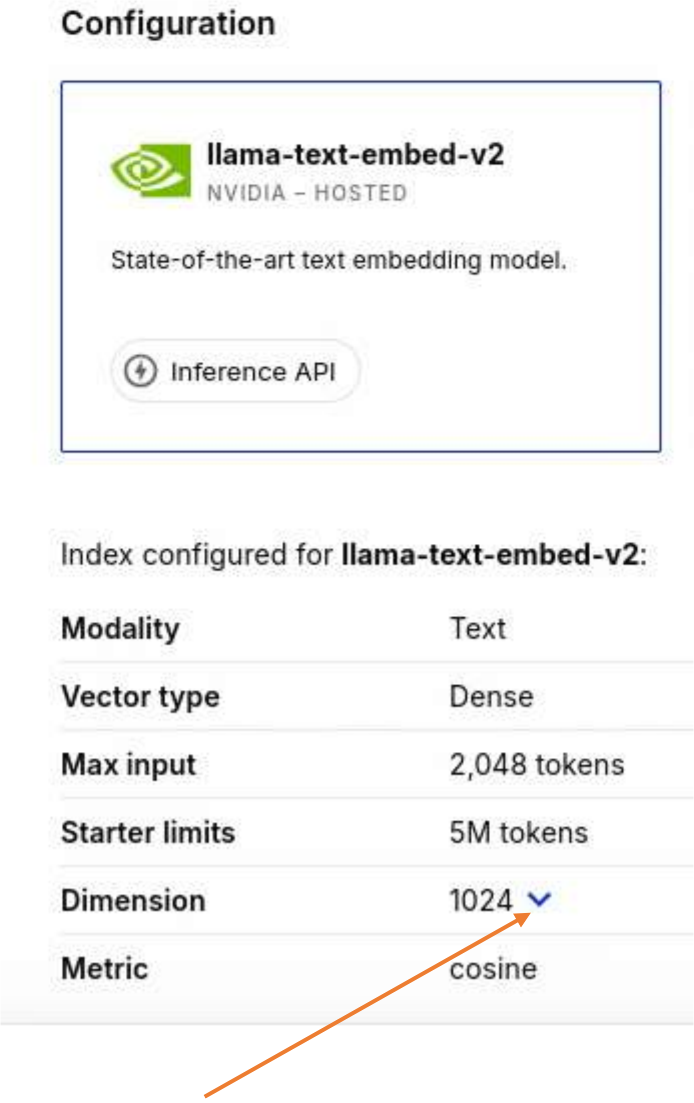
Index configured for **llama-text-embed-v2**:

Integrated embedding New

You are currently on the
Starter plan

Cancel | Create index

Figure 32: Select an index and select a Configuration for index (such as Vector Dimension: 768, 1024 etc). See below



Configuration

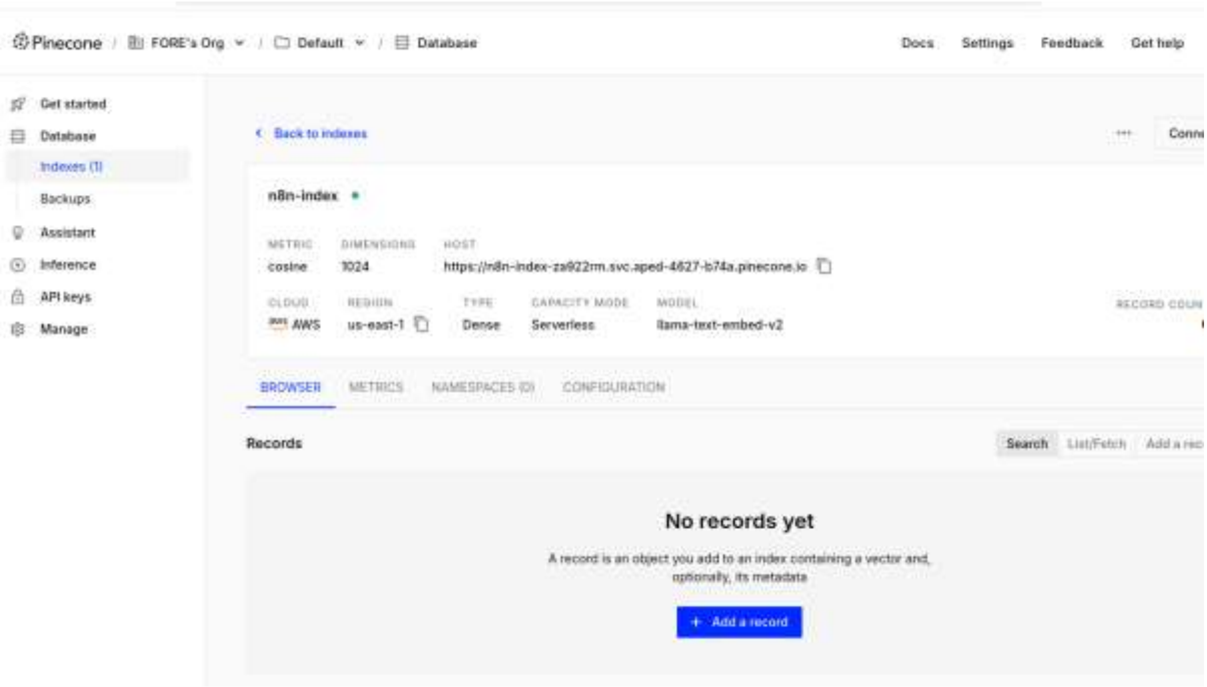
llama-text-embed-v2
NVIDIA – HOSTED

State-of-the-art text embedding model.

Index configured for **llama-text-embed-v2**:

Modality	Text
Vector type	Dense
Max input	2,048 tokens
Starter limits	5M tokens
Dimension	1024 ⌄
Metric	cosine

Figure 33: Set vector Dimension as per your embedder (click Down-arrow). For example, nomic-embed-text has a vector dimension of 768.



Pinecone / FORE's Org / Default / Database

Docs Settings Feedback Get help

- Get started
- Database
  - Indexes (1)
  - Backups
- Assistant
- Inference
- API keys
- Manage

< Back to indexes

n8n-index

METRIC	DIMENSIONS	HOST
cosine	1024	https://n8n-index-za922rn.svc.aped-4627-b74a.pinecone.io

CLOUD	REGION	TYPE	CAPACITY MODE	MODEL	RECORD COUN
AWS	us-east-1	Dense	Serverless	llama-text-embed-v2	

BROWSER METRICS NAMESPACES (0) CONFIGURATION

Records

Search List/Fetch Add a rec

No records yet

A record is an object you add to an index containing a vector and, optionally, its metadata

+ Add a record

Figure 34: Create index. Records will come from n8n

Note that selected embedder will also decide max input tokens. The character splitter chunk size will affect the amount of **input tokens** you're trying to get. For the embedding model of. *mxbai-embed-large,* max input token limit is 512,

P. RAG with n8n

See this link for the detailed blog. Vectorization may take a very long time depend=ing upon the input size.

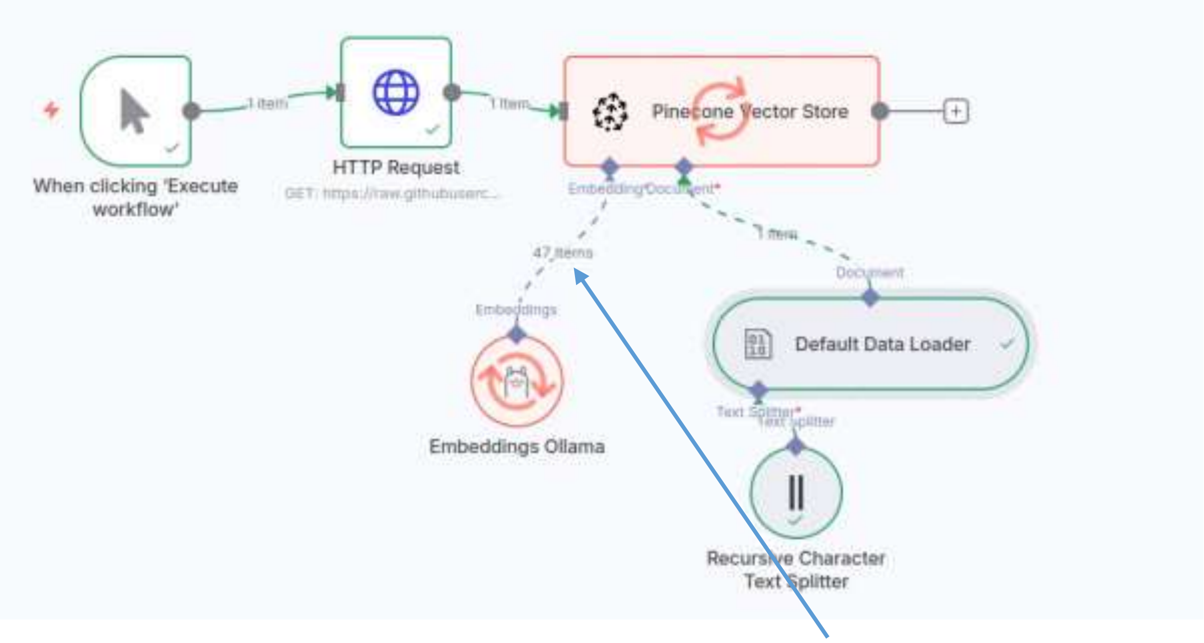
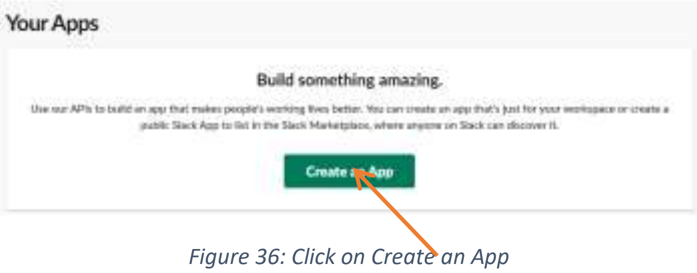


Figure 35: Our workflow to save data to vector store. 47 items possibly means that 47 chunks were processed till now. Chunk size for Recursive text splitter is 512 as selected embedder is:

Vector store first:

Slack API

To work with Slack API, click on this link or in Google, search for Slack API. Click here OR here.

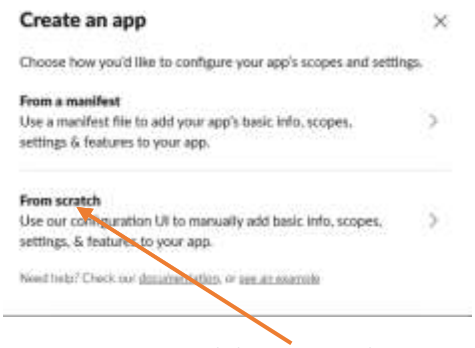


Your Apps

Build something amazing.

Use our APIs to build an app that makes people's working lives better. You can create an app that's just for your workspace or create a public Slack App to list in the Slack Marketplace, where anyone on Slack can discover it.

Figure 36: Click on Create an App



Create an app

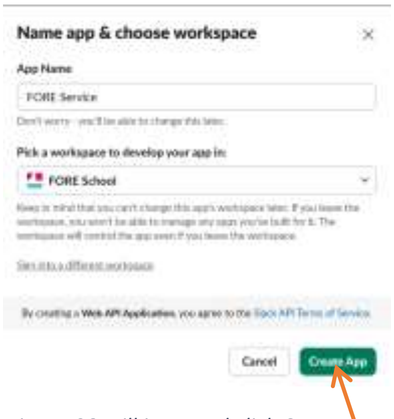
Choose how you'd like to configure your app's scopes and settings.

From a manifest
Use a manifest file to add your app's basic info, scopes, settings & features to your app.

From scratch
Use our configuration UI to manually add basic info, scopes, settings, & features to your app.

Need help? Check our documentation, or see an example

Figure 37: Click From Scratch



Name app & choose workspace

App Name: FORE Service

Don't worry - you'll be able to change this later.

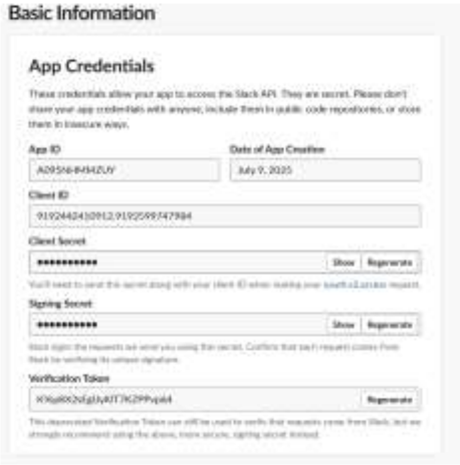
Pick a workspace to develop your app in: FORE School

Keep in mind that you can't change this app's workspace later. If you leave the workspace, you won't be able to manage any apps you've built for it. The workspace will control the app even if you leave the workspace.

Sign into a different workspace

By creating a **Web API Application**, you agree to the Slack API Terms of Service.

Figure 38: Fill it up and click Create App



Basic Information

App Credentials

These credentials allow your app to access the Slack API. They are secret. Please don't share your app credentials with anyone, include them in public code repositories, or store them in insecure ways.

App ID: A095N6B4MZUY

Date of App Creation: July 9, 2025

Client ID: 9192442410912.9192599747984

Client Secret: ●●●●●●●●●●● Show | Regenerate

You'll need to send this secret along with your client ID when making your oauth.v2.access request.

Signing Secret: ●●●●●●●●●●● Show | Regenerate

Slack signs the requests we send you using this secret. Confirm that each request comes from Slack by verifying its unique signature.

Verification Token: X9qRK62sEgUyAIT7K2PPvpk4 Regenerate

This deprecated Verification Token can still be used to verify that requests come from Slack, but we strongly recommend using the above, more secure, signing secret instead.

Figure 39: Not sure if to note down these or not.

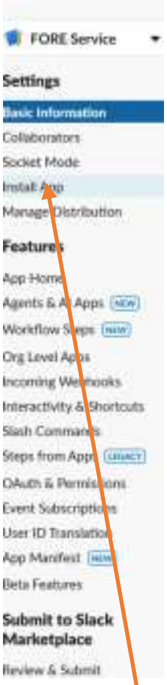
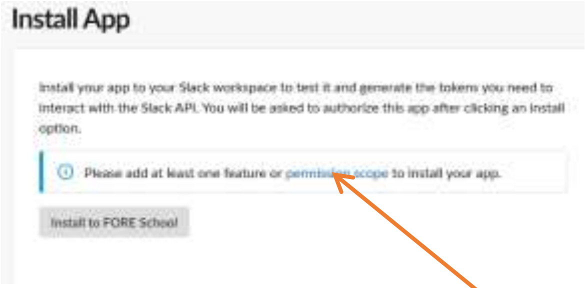


Figure 40: Click Install Apps



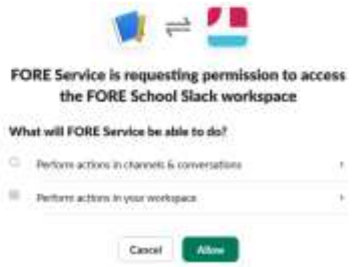
Install App

Install your app to your Slack workspace to test it and generate the tokens you need to interact with the Slack API. You will be asked to authorize this app after clicking an install option.

ⓘ Please add at least one feature or permission scope to install your app.

Install to FORE School

Figure 41: Click Install to FORE School. But first Give permissions



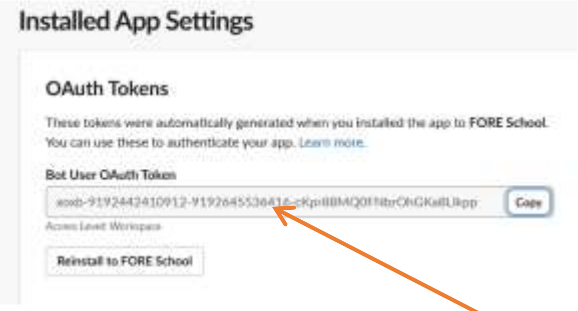
FORE Service is requesting permission to access the FORE School Slack workspace

What will FORE Service be able to do?

Perform actions in channels & conversations

Perform actions in your workspace

Figure 42: Allow your App permissions on your Workspace



Installed App Settings

OAuth Tokens

These tokens were automatically generated when you installed the app to FORE School. You can use these to authenticate your app. Learn more.

Bot User OAuth Token

xoxb-9192442410912-9192645536416-cKpr88MQ0FNbrOhGKa8Llkpp

Access Level: Workspace

Figure 43: A token will be generated. Note this down. This token is important.

xoxb-9192442410912-9192645536416-cKpr88MQ0FNbrOhGKa8Llkpp

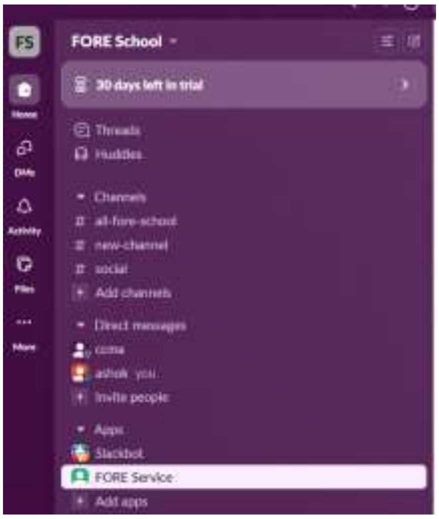
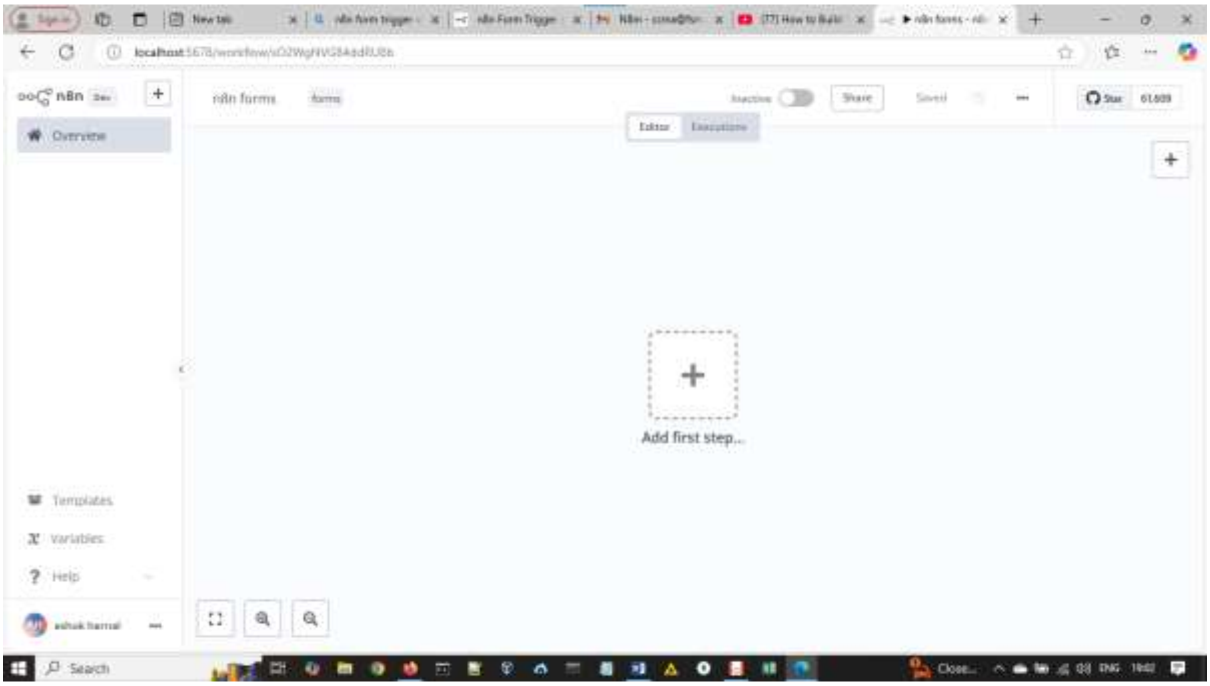
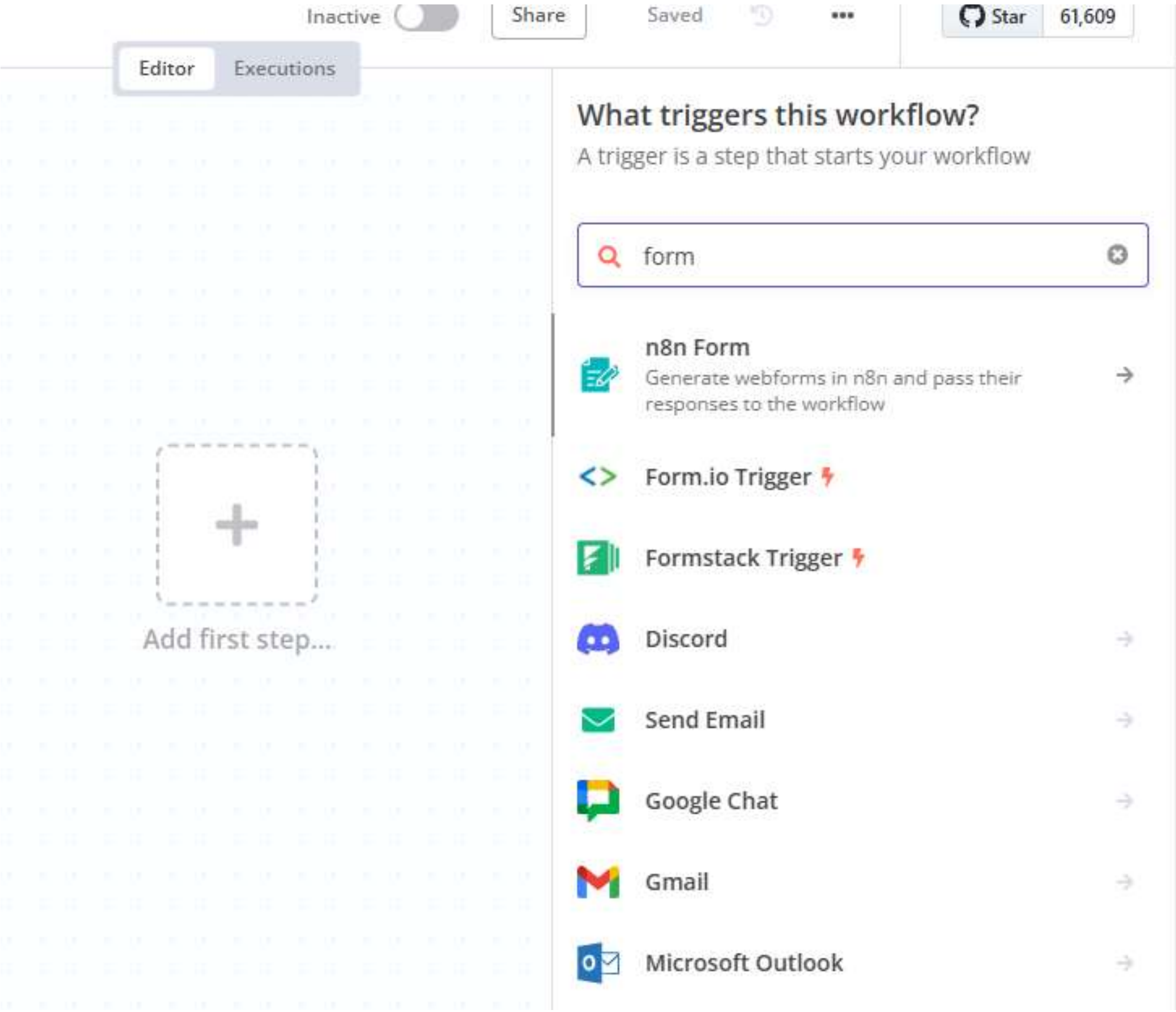


Figure 44: An App FORE Service is now visible

[YouTube video]





What triggers this workflow?

A trigger is a step that starts your workflow

form

n8n Form
Generate webforms in n8n and pass their responses to the workflow

Form.io Trigger

Formstack Trigger

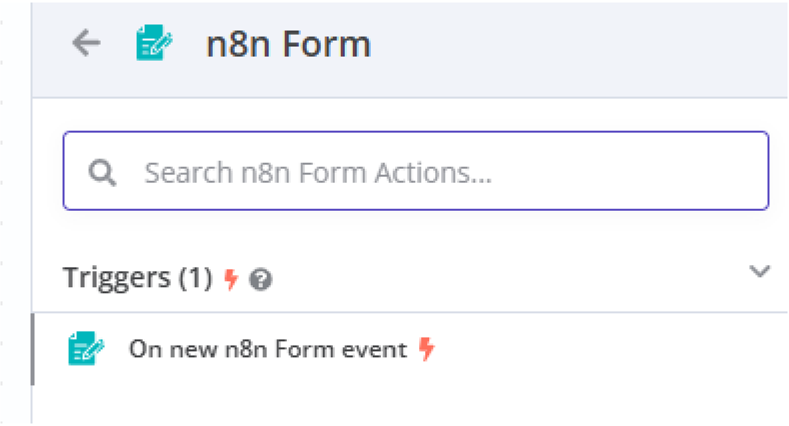
Discord

Send Email

Google Chat

Gmail

Microsoft Outlook



n8n Form
Search n8n Form Actions...
Triggers (1)
On new n8n Form event