

# GraphQLConf

September 10-12, 2024 | San Francisco, CA

hosted by



GraphQL  
Foundation

# Dynamic (but safe) Operations

Using AI to generate Trusted Operations from Text Prompts

#GraphQLConf

# I'm **Obsessed** with GraphQL APIS

**Michael Watson**

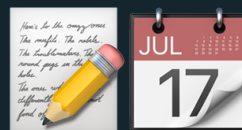
Developer Relations at Apollo







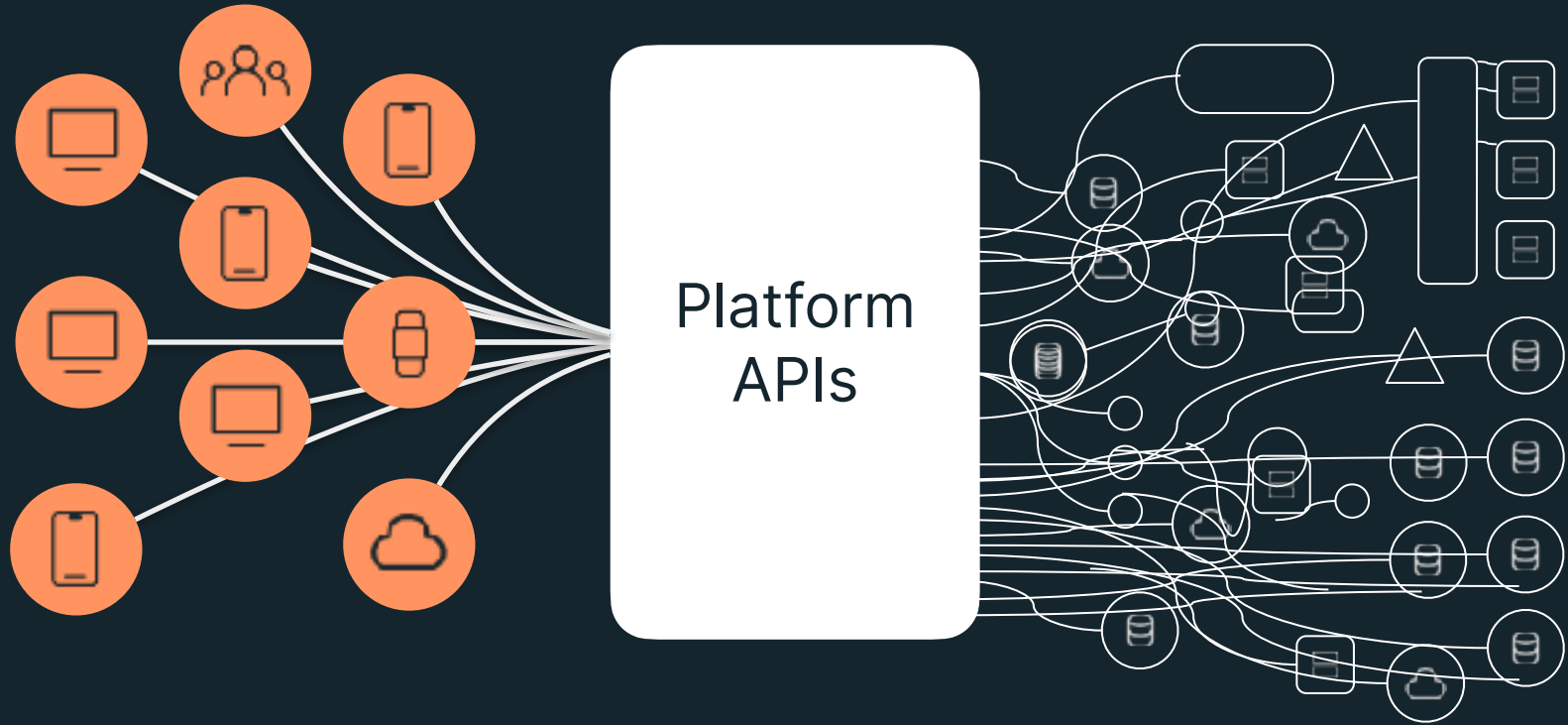
Welcome  
TO THE TEAM



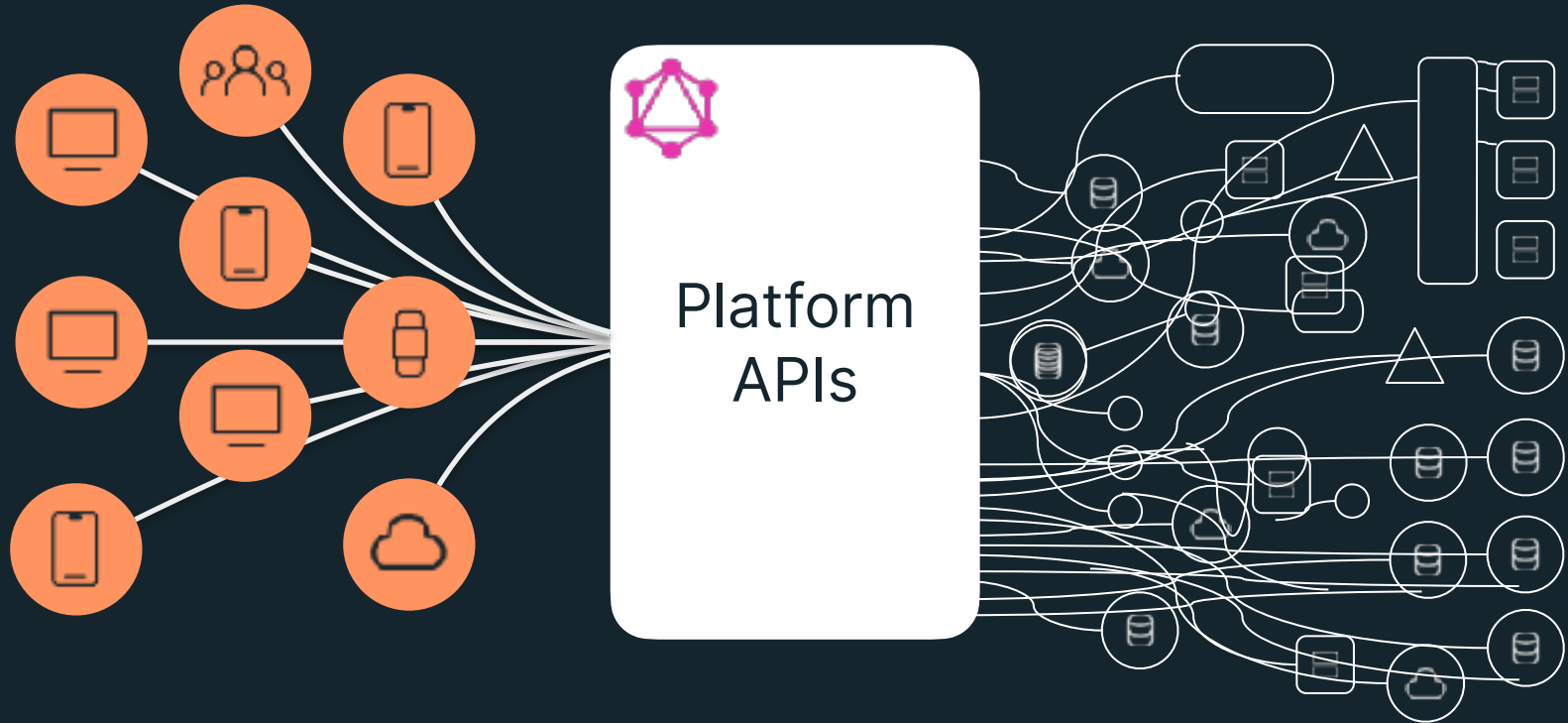


**How can  
we help?**

# Platform APIs



# Platform APIs





Home

## REST API

API Version: 2022-11-23 (latest)

Quickstart

About the REST API

Using the REST API

Authentication

Guides

Actions

Activity

Apps

Billing

Branches

Checks

Classroom

Code scanning

Code security settings

Codes of conduct

Codespaces

Collaborators

Commits

Copilot

Dependabot

Dependency graph

Deploy keys

The REST API is now vendored. For more information, see "About API vendoring."

REST API / Actions /

## REST API endpoints for GitHub Actions artifacts

Use the REST API to interact with artifacts in GitHub Actions.

### About artifacts in GitHub Actions

You can use the REST API to download, delete, and retrieve information about workflow artifacts in GitHub Actions. Artifacts enable you to share data between jobs in a workflow and store data once that workflow has completed. For more information, see "[Storing and sharing data from a workflow](#)."

### List artifacts for a repository

Lists all artifacts for a repository.

Anyone with read access to the repository can use this endpoint.

OAuth app tokens and personal access tokens (classic) need the `repo` scope to use this endpoint with a private repository.

#### Fine-grained access tokens for "List artifacts for a repository"

This endpoint works with the following fine-grained token types:

- [GitHub App user access tokens](#)
- [GitHub App installation access tokens](#)
- [Fine-grained personal access tokens](#)

The fine-grained token must have the following permission set:

- "Actions" repository permissions (read)

#### Code samples for "List artifacts for a repository"

##### Request example

**GET** /repos/{owner}/{repo}/actions/artifacts

cURL JavaScript GitHub CLI

```
curl -H 1
-H "Accept: application/vnd.github+json" \
-H "Authorization: Bearer <YOUR_TOKEN>" \
-H "X-GitHub-Api-Version: 2022-11-23" \
https://api.github.com/repos/OWNER/REPO/actions/artifacts
```

##### Response

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GraphQL API

Overview

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## GitHub GraphQL API documentation

To create integrations, retrieve data, and automate your workflows, use the GitHub GraphQL API. The GitHub GraphQL API offers more precise and flexible queries than the GitHub REST API.

Overview

Start here View all

### Forming calls with GraphQL

Learn how to authenticate to the GraphQL API, then learn how to create and run queries and mutations.

### Introduction to GraphQL

Learn useful terminology and concepts for using the GitHub GraphQL API.

### Using the Explorer

You can run queries on real GitHub data using the GraphQL Explorer, an integrated development environment in your browser that includes docs, syntax highlighting, and validation errors.

Popular

### Explorer

### Public schema

Download the public schema for the GitHub GraphQL API.

### Schema preview

You can preview upcoming features and changes to the GitHub GraphQL schema before they are added to the GitHub GraphQL API.

### Using pagination in the GraphQL API

Learn how to traverse data sets using cursor-based pagination with the GraphQL API.

What's new View all

### Client IDs are now included in App API responses

August 23

### Retrieve the code security configuration currently applied to a repository via API

August 16

### Secret scanning push protection is supported for content uploaded REST API endpoints

August 13

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Variables	Households
Age	
18-24	1.00
25-34	1.00
35-44	1.00
45-54	1.00
55-64	1.00
65+	1.00
Gender	
Male	1.00
Female	1.00
Marital status	
Married	1.00
Single	1.00
Divorced	1.00
Widowed	1.00
Partnered	1.00
Never married	1.00
Never lived with partner	1.00
Lived with partner	1.00
Lived with partner and children	1.00
Lived with partner and grandchildren	1.00
Lived with partner and great-grandchildren	1.00
Lived with partner and other relatives	1.00
Lived with partner and other friends	1.00
Lived with partner and other pets	1.00
Lived with partner and other animals	1.00
Lived with partner and other plants	1.00
Lived with partner and other objects	1.00
Lived with partner and other people	1.00
Lived with partner and other things	1.00
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Lived with partner and other periods of time	1.00



## Docs

Q K



A GraphQL schema provides a root type for each kind of operation.

Root Types

query: Query

mutation: Mutation

All Schema Types

AbortQueuedMigrationsInput

AbortQueuedMigrationsPayload

AbortRepositoryMigrationInput

AbortRepositoryMigrationPayload

AcceptEnterpriseAdministratorInvitationInput

AcceptEnterpriseAdministratorInvitationPayload

AcceptEnterpriseMemberInvitationInput

AcceptEnterpriseMemberInvitationPayload

AcceptTopicSuggestionInput

AcceptTopicSuggestionPayload

Actor

ActorLocation

ActorType



```
1 query {  
2  
3 viewer {  
4   topRepositories(first: 10) {  
5     nodes {  
6       name  
7       stargazerCount  
8       allowUpdateBranch  
9     }  
10  }  
11 }  
12 }  
13 }  
14 }
```



Variables

Headers



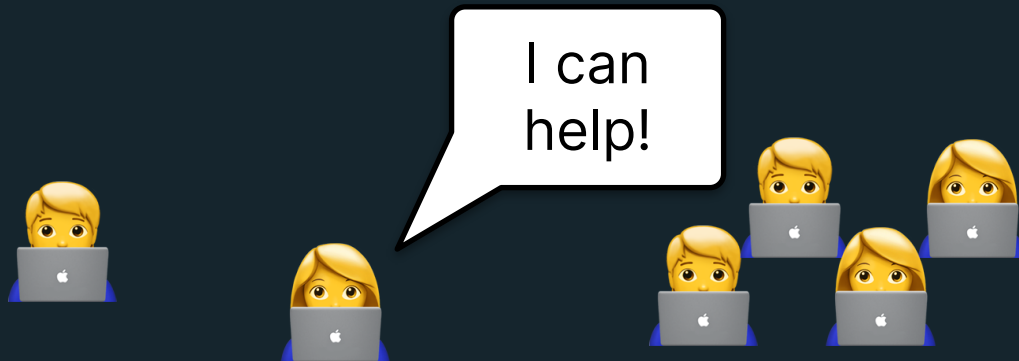


I'm new  
to GraphQL



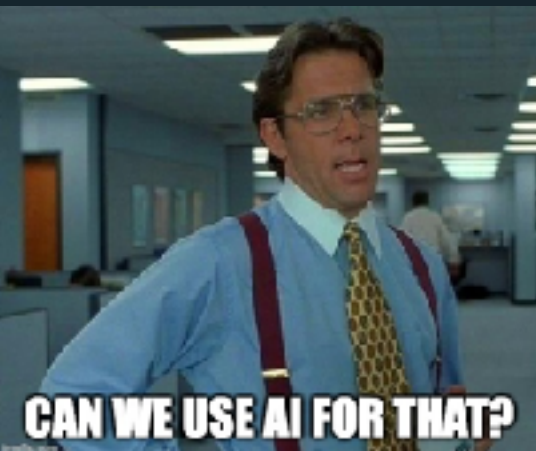
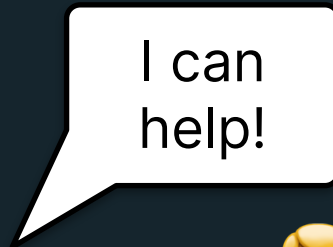
*How do I get  
... from API?*

# *Office Hours!!!*





# *Office Hours!!!*





copilot-openapi




CHAT



 GitHub Copilot

Welcome, @michael-watson, I'm your Copilot and I'm here to help you get things done faster.

I'm powered by AI, so surprises and mistakes are possible. Make sure to verify any generated code or suggestions, and [share feedback](#) so that we can learn and improve. Check out the [Copilot documentation](#) to learn more.

 *Help* What can you do?

The GitHub OpenAPI specification is in the current opened folder along with the current React website I'm working with.

For the "react-welcome-world" repository, I need to find the 20 most recent closed issues, and return each issue's title, URL, and first 5 labels.



0 0 0

W 0

Live Share

Auto Attach With Flag

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CHAT



GitHub Copilot

Hi @michael-watson, how can I help you?

🔗 [Help](#) What can you do?

The GitHub OpenAPI specification is in the current opened folder along with the current React website I'm working with.

Can you write me a typescript function that takes a given repository name and find the most recent closed issues. I'll need the 20 most recent closed issues along with each issue's title, URL, and first 5 labels.



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CHAT



GitHub Copilot

Hi @michael-watson, how can I help you?

/help What can you do?

The GitHub GraphQL schema is in the current opened folder.

For the "reactorHello-World" repository, find the 20 most recent closed issues, and return each issue's title, URL, and first 5 labels.



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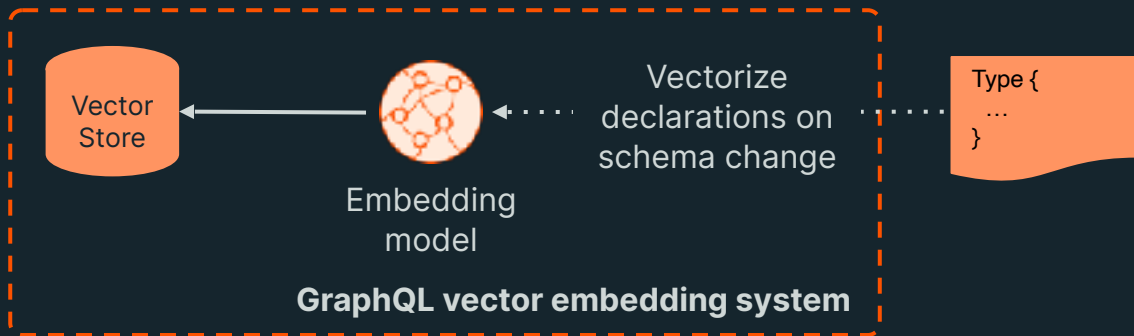


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LLMs can easily  
understand GraphQL

Can we provide a GraphQL  
aware context to LLMs?

# Using **RAG** with GraphQL



# How it **works**



How do I get  
... from API?

**LLM system**



Embedding  
model

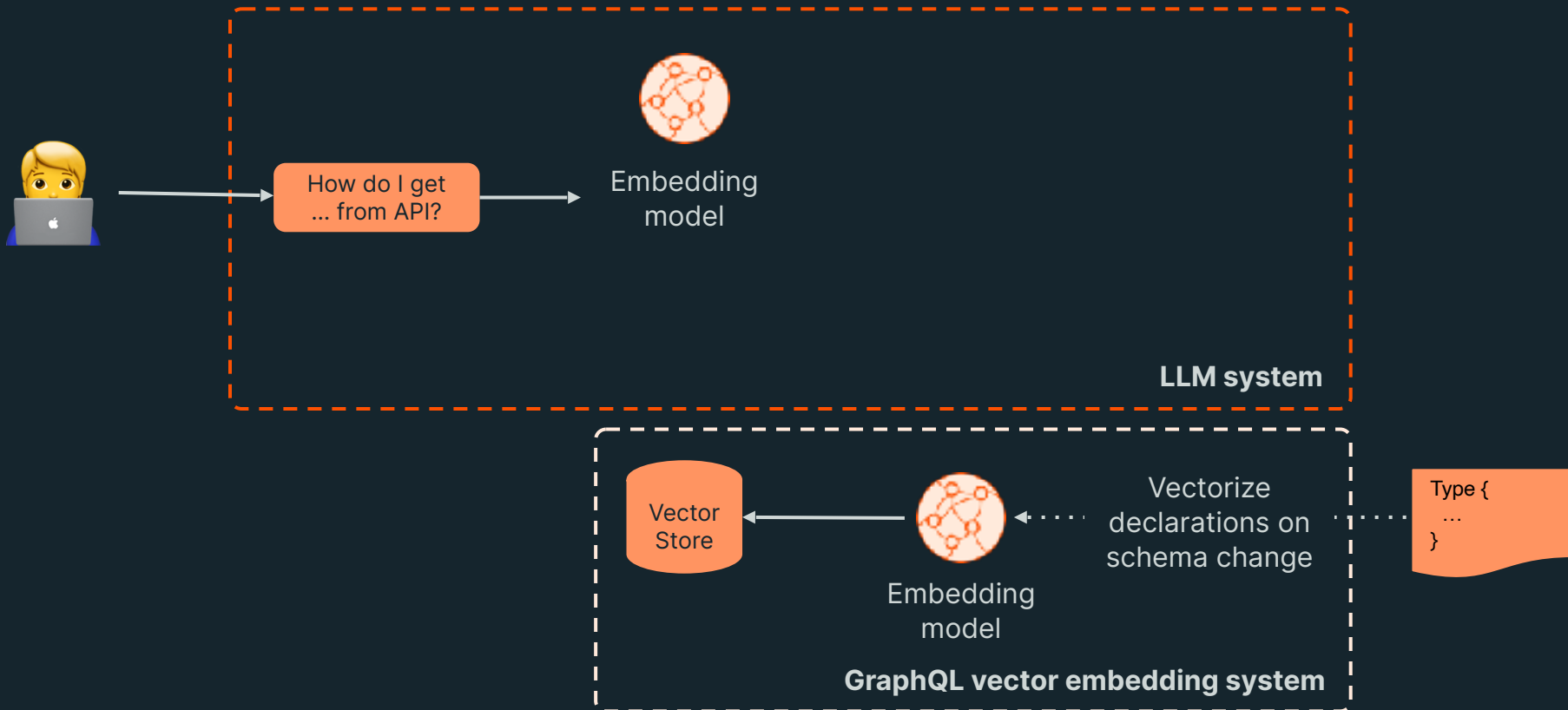
Vectorize  
declarations on  
schema change

```
Type {  
  ...  
}
```

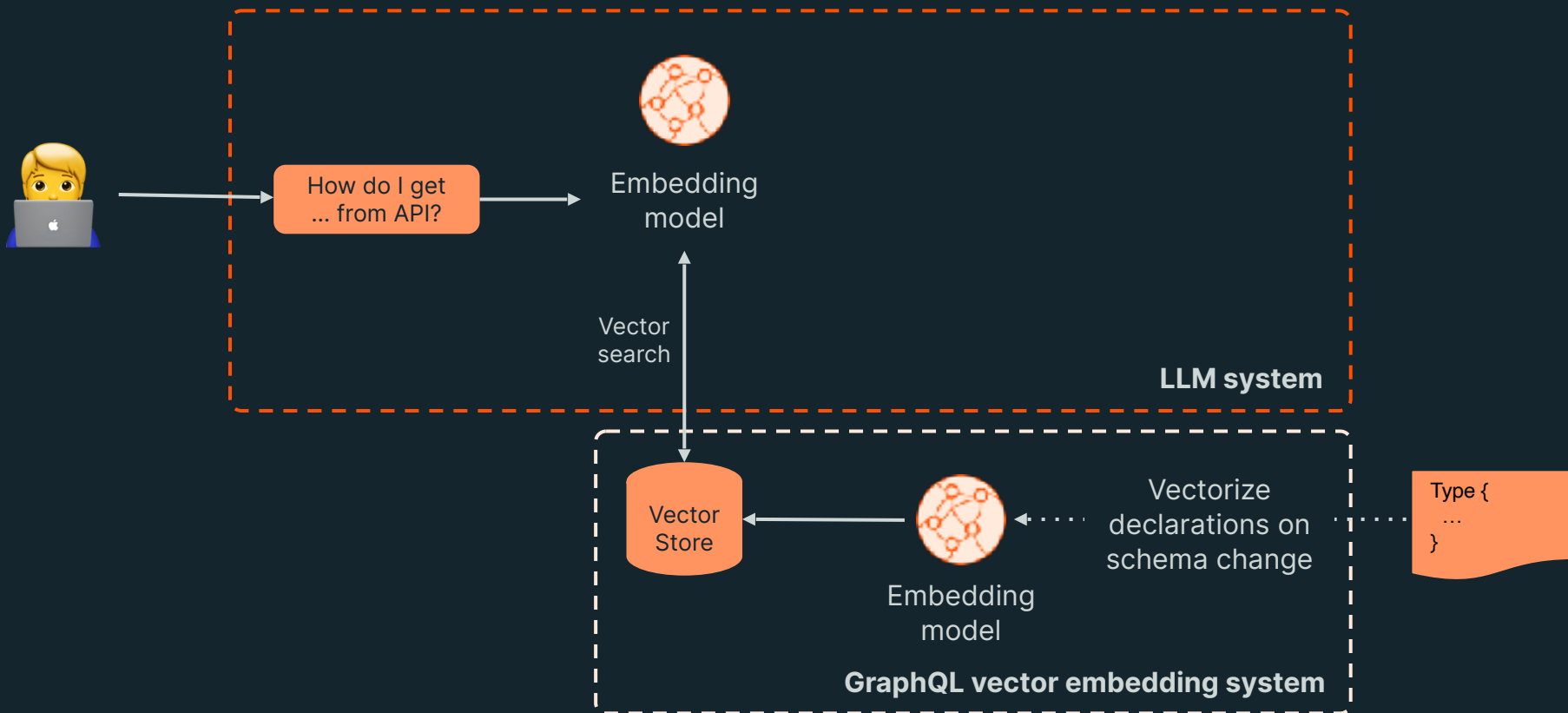
**GraphQL vector embedding system**



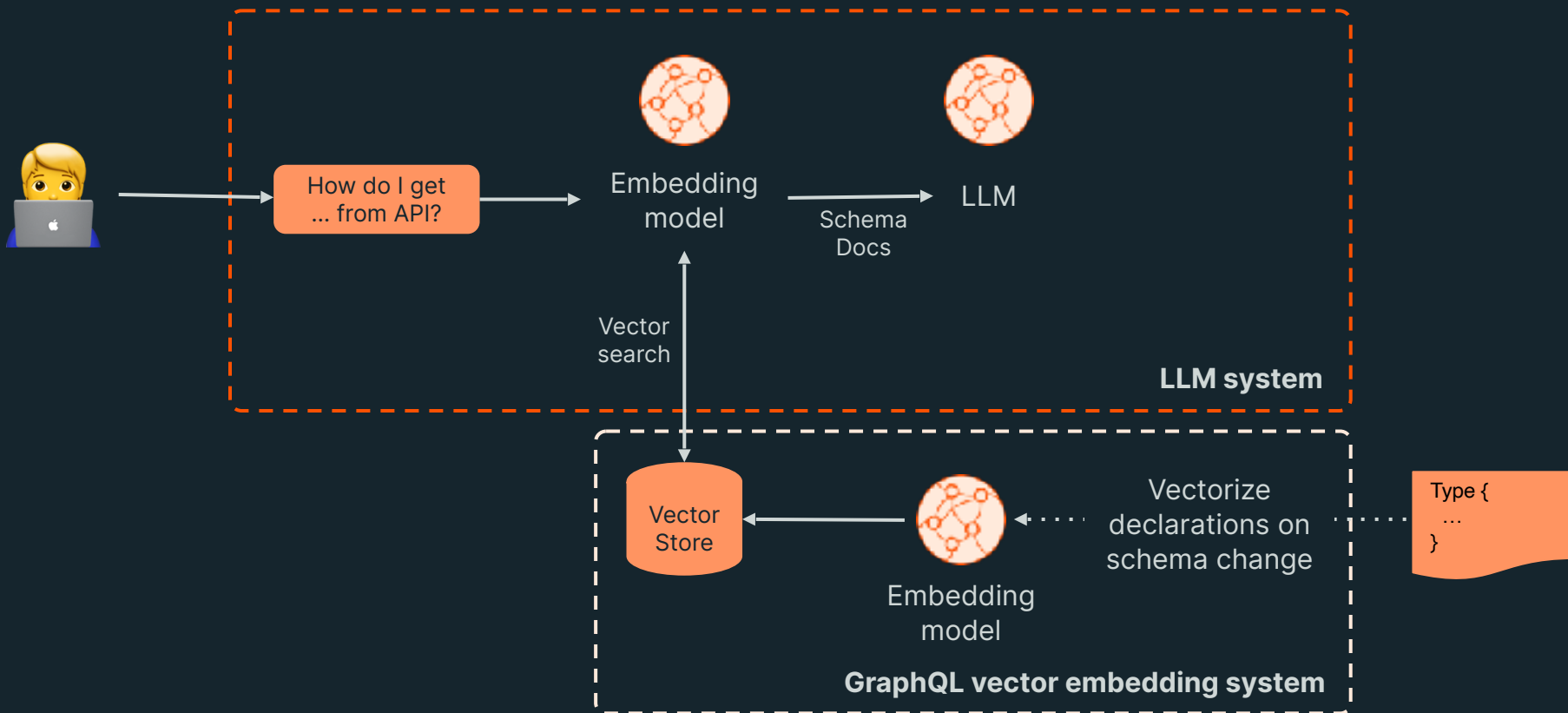
# How it **works**



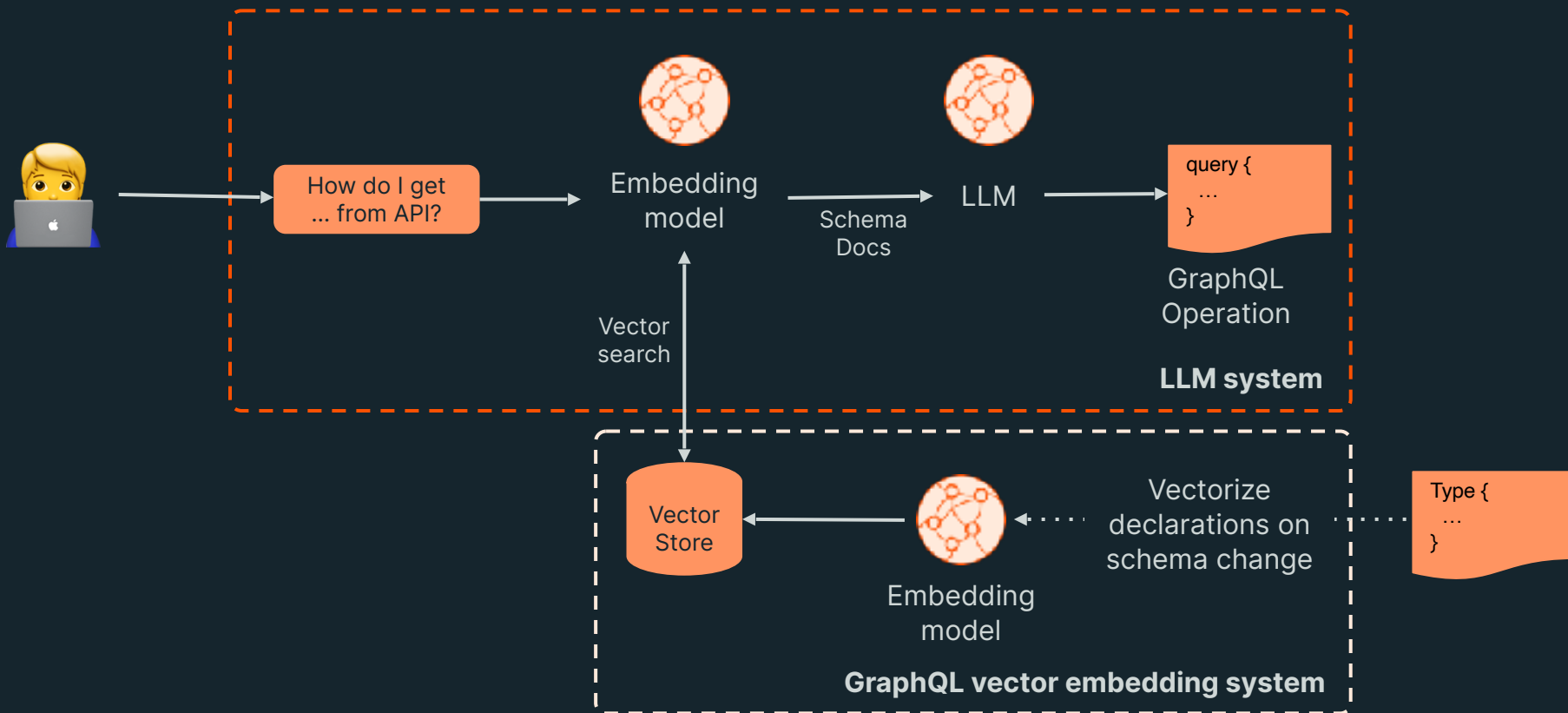
# How it **works**



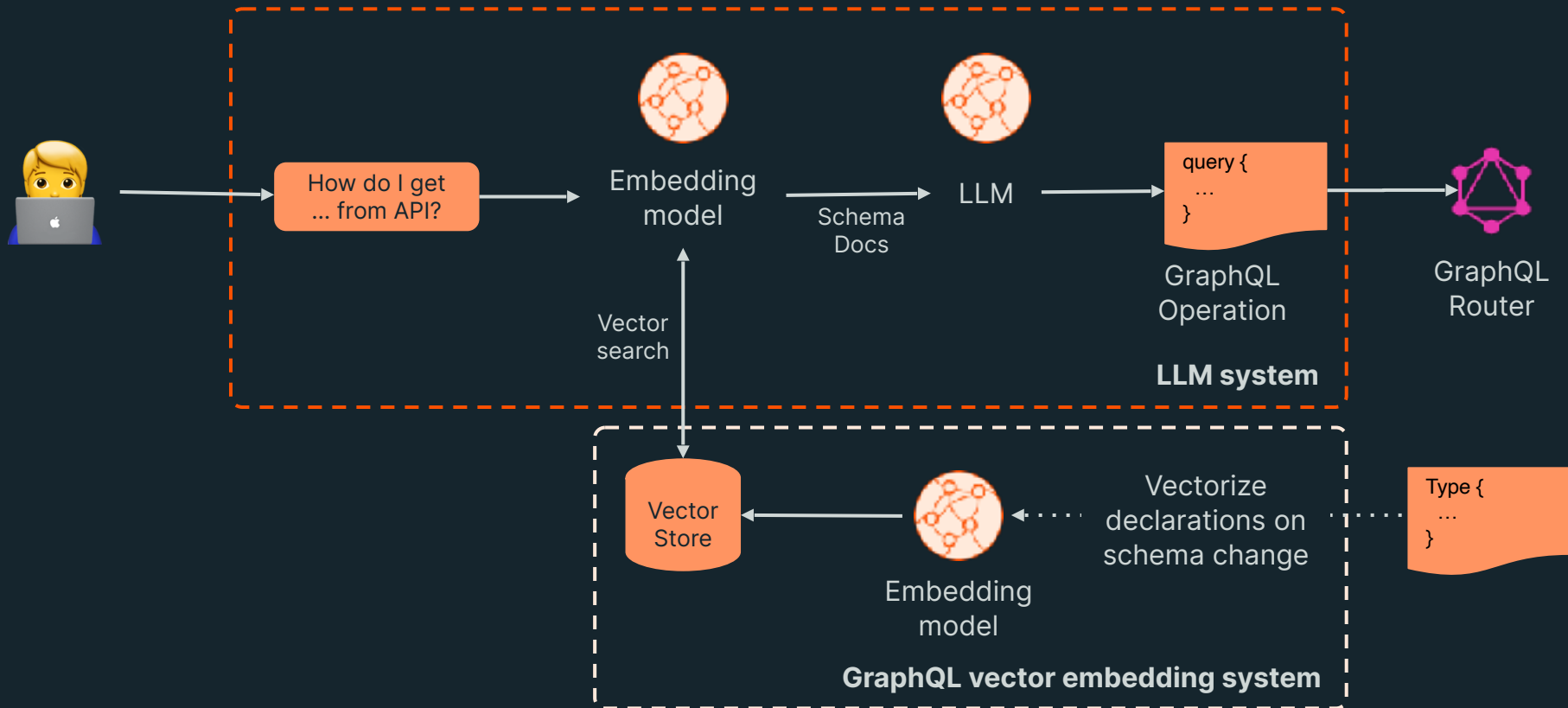
# How it works



# How it works



# How it works



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# DEMO

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