

Edge Functions: Node and native npm compatibility

2023-12-12 • 6 minute read



We are excited to announce that [Edge Functions](#) now natively supports npm modules and Node built-in APIs. You can directly import millions of popular, commonly used npm modules into your Edge Functions.

```
1 import { drizzle } from 'npm:drizzle-orm/node-postgres'
```



Migrate existing...

You can migrate your... changes.

We only collect analytics essential to ensuring smooth operation of our services.

[Accept](#)

[Opt out](#)

[Learn more](#)

We created a demo to show how to migrate a Node app that uses Express, Node Postgres, and Drizzle. For more information on using npm modules and Node built-ins within your Edge Functions, see the [Managing dependencies guide](#).

Running Node in Deno just got a whole lot easier!



How npm modules work under the hood

We run an open source Deno server for hosting Edge Functions called [Supabase Edge Runtime](#). This custom version helps us keep Edge Functions working the same way no matter where it is deployed - on our hosted platform, in local development, or in your self-hosted environment.

The biggest challenge when adding npm support was finding an approach that would work across all environments. We wanted to keep the workflow close to the Deno CLI experience. It should be possible to import npm modules directly in your source code without an extra build step.

When deploying a Function, we serialize its module graph into a single file format (an [eszip](#)). In the hosted environment, all module references are then loaded from the eszip. This prevents any extra latency in fetching modules and potential conflicts between module dependencies.

We used the eszip format to make it so we only need to import the module once. This has an additional benefit for local development, and app developers who prefer to use permanent connections.

We only collect analytics essential to ensuring smooth operation of our services.

[Learn more](#)

with npm modules installed in the user's system since the Edge Function's npm modules are self-contained within the eszip.


[Refactoring the module loader](#) fixes a few other bugs, such [edge functions erroring out](#) when an `deno.lock` file is already present in the project.

A few other things you've asked for...

Regional Invocations

You now have the option to specify a region when running an Edge Function (perhaps we should change the name in the future). Usually, Edge Functions run in the region closest to the user invoking the Function. However, sometimes you want to run it closer to your Postgres database or another 3rd party API for optimal performance.

Functions are still deployed to all regions. However, during invocation, you can provide the `x-region` header to restrict the execution to a specific region.

```
cURL JavaScript 
```

```
1 # https://supabase.com/docs/guides/functions/deploy#invoki
2 curl --request POST 'https://<project_ref>.supabase.co/fun
3 --header 'Authorization: Bearer ANON_KEY' \
4 --header 'Content-Type: application/json' \
5 --header 'x-region: eu-west-3' \
6 --data '{ "name":"Functions" }'
```

 Check out the [Regional Invocation guide](#) for more details.

Better Metrics

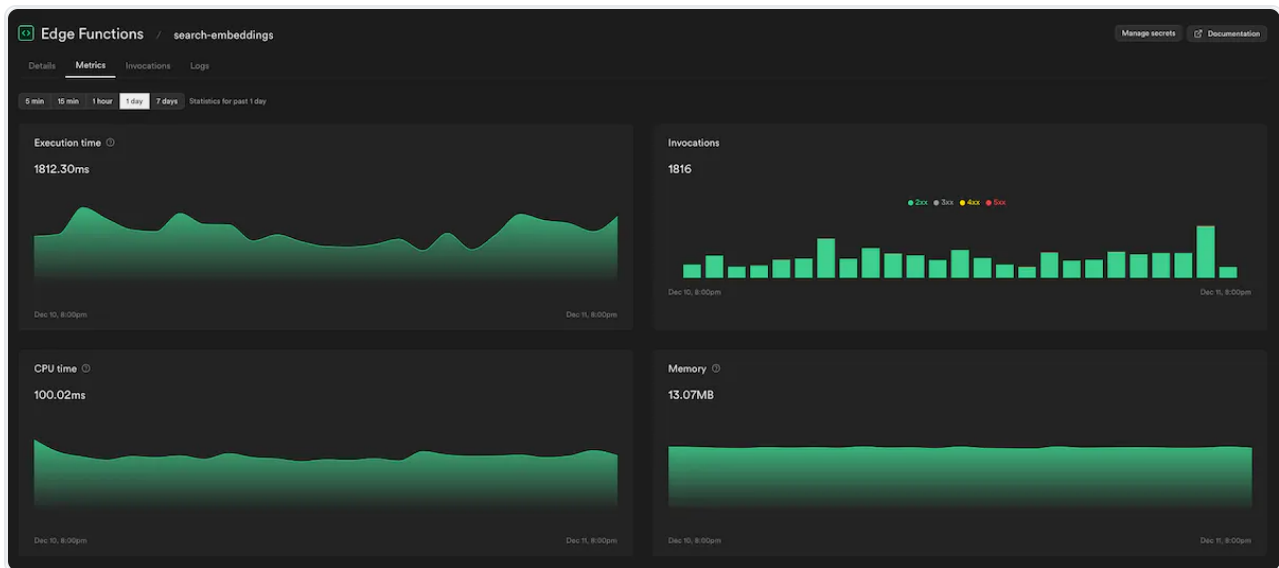
We've added more metrics in the Edge Functions section of the [Supabase Dashboard](#): it now shows CPU time and memory used. We've also broken down invocations by HTTP status codes

These changes help

We only collect analytics essential to ensuring smooth operation of our services.

[Learn more](#)

 See the [logging and metrics guide](#) for Edge Functions to learn more.



Track errors with Sentry

Our friends at Sentry recently shipped an official [Sentry SDK for Deno](#). With this, it's now easy to track errors and exceptions in your edge functions in Sentry.

Here is a simple example of how to handle exceptions within your function and send them to Sentry.

```
1 import * as Sentry from 'https://deno.land/x/sentry/index.r
2
3 Sentry.init({
4   dsn: _DSN_,
5   integrations: [],
6   // Performance Monitoring
7   tracesSampleRate: 1.0,
8   // Set sampling rate for profiling - this is relative to
9   profilesSampleRate: 1.0,
10 })
11
12 // Set region and execution_id as custom tags
13 Sentry.setTag('region', Deno.env.get('SB_REGION'))
14 Sentry.setTag('execution_id', Deno.env.get('SB_EXECUTION_ID'))
15
16 Deno.serve(async (req) => {
17   try {
18     const {
19     const data
20     message
21   }
22
```

We only collect analytics essential to ensuring smooth operation of our services.

[Learn more](#)

```
23     return new Response(JSON.stringify(data), { headers: {
24   } catch (e) {
25     Sentry.captureException(e)
26     return new Response(JSON.stringify({ msg: 'error' }), {
27       status: 500,
28       headers: { 'Content-Type': 'application/json' },
29     })
30   }
31 })
```

What's next

NPM support was one of the most requested features for Edge Functions. If you couldn't use Edge Functions previously because of the lack of support, we hope this update will entice you to [try it again](#). If you run into any issues, we are just [one support request](#) away.

For existing Edge Functions users, regional invocations, better metrics, and error handling are just a glimpse of what will come next. We continue to iterate on platform stability and setting custom limits on resources Edge Functions can use. Watch out for another blog post in the new year.

More Launch Week X

[Day 1 - Supabase Studio update: AI Assistant and User Impersonation](#)

[pg_graphql: Postgres functions now supported](#)

[Postgres Language Server: implementing the Parser](#)

[The Supabase Album](#)

[Supabase Launch Week X Hackathon](#)

[Launch Week X Community Meetups](#)

Share this article



We only collect analytics essential to ensuring smooth operation of our services.

[Learn more](#)

Next post

pg_graphql: Postgres functions now supported

12 December 2023

Related articles

pg_graphql: Postgres functions now supported

Supabase Studio: AI Assistant and User Impersonation

Postgres Language Server: implementing the Parser

How design works at Supabase

Supabase Launch Week X Hackathon

[View all posts](#)

Build in a weekend, scale to millions

[Start your project](#)

We protect your data. [More on Security](#)

✓ SOC2 Type 2 Certified

✓ HIPAA Compliant

We only collect analytics essential to ensuring smooth operation of our services.

[Learn more](#)



Product	Resources	Developers	Company
Database	Support	Documentation	Blog
Auth	System Status	Changelog	Customer Stories
Functions	Become a Partner	Contributing	Careers
Realtime	Integrations	Open Source	Company
Storage	Experts	SupaSquad	Terms of Service
Vector	Brand Assets / Logos	DevTo	Privacy Policy
Pricing	Security and Compliance	RSS	Privacy Settings
Launch Week X	DPA		Acceptable Use Policy
	SOC2		Support Policy
	HIPAA		Service Level Agreement
			Humans.txt
			Lawyers.txt
			Security.txt



We only collect analytics essential to ensuring smooth operation of our services.

[Learn more](#)