

How Openfit optimized Lambda with Datadog

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Developer Relations



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Who?

Modern
monitoring &
analytics



DATADOG

Digital fitness streaming platform

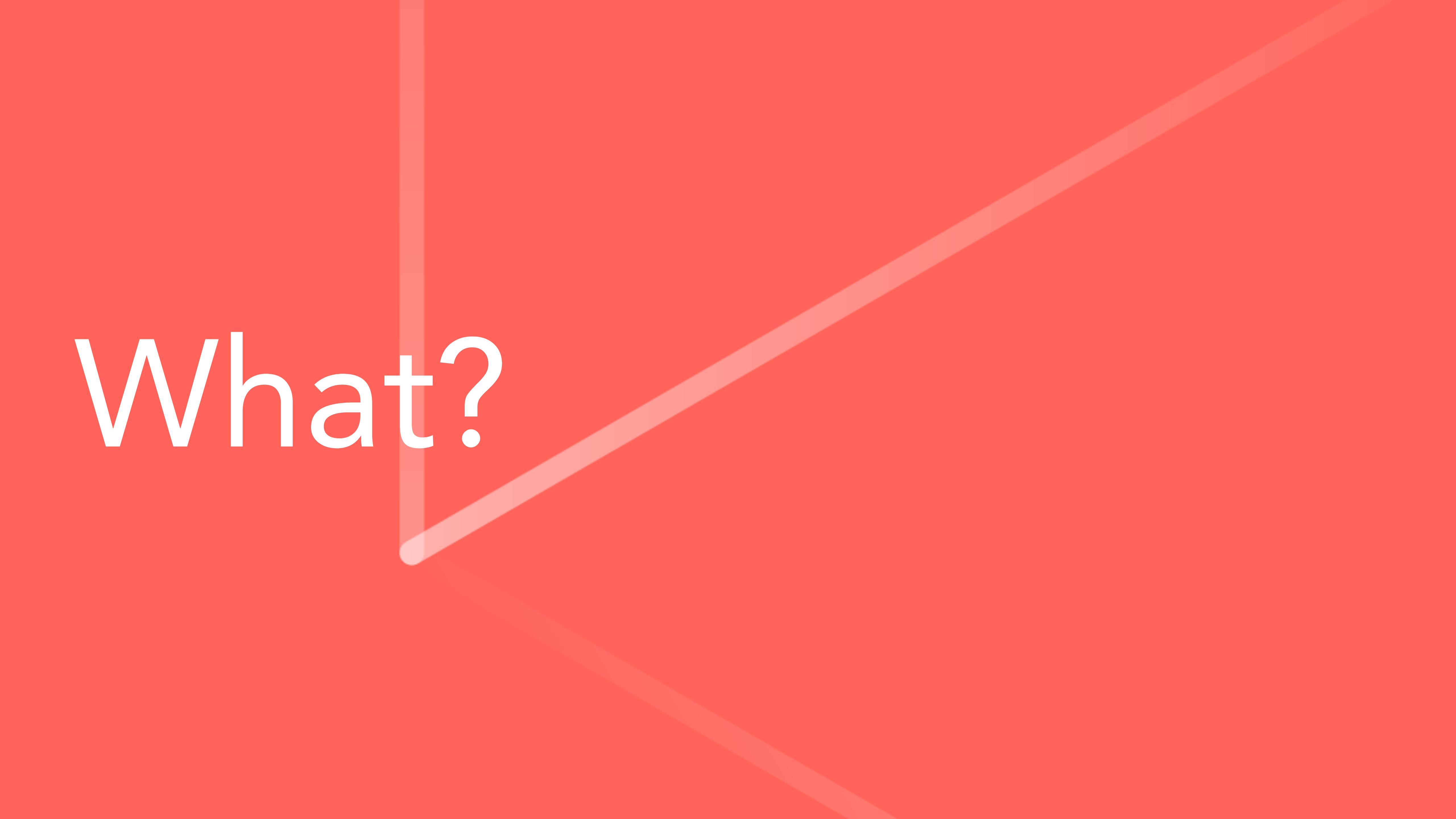


openfit.

Openfit: some numbers

- Active subscribers: 50,000
- Plays per month: 400,000
- Hours streamed per month: 500,000
- Service calls per month: 65 million
- 206 Lambdas across 26 API gateway endpoints

Openfit:
100% serverless

The background is a solid red color. It features several thin, light-red lines that intersect to form a geometric pattern. A vertical line is positioned on the left side. Two diagonal lines intersect at a point near the center, creating a triangular shape. The word "What?" is written in a large, white, sans-serif font, positioned to the left of the intersection point.

What?

"As with all transformations, you have to make sure it fits your model."

– Reza Javidi



Consider the possibilities

Servers (EC2)

- Provisioning of instances, ASG, sec groups, VPC, NAT...
- Maintenance of OS, frameworks, code...
- Security and logistics...

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Containers

- Provision and deploy the container images, VPC, NAT...
- Maintenance of code
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Serverless (Lambda)

- Maintenance of code and dependencies
- Code-level security

Serverless isn't magic; your workload needs to fit the model

- Discrete actions that aren't long-running.
- Actions that can deal with—or benefit from—high concurrency.
- Actions that have predictable and stable resource requirements.

*"RESTful APIs
that do cloud
actions are
perfect
candidates for
serverless."*

– Reza Javidi





Sure, but...

A tale of two models

Servers (EC2)

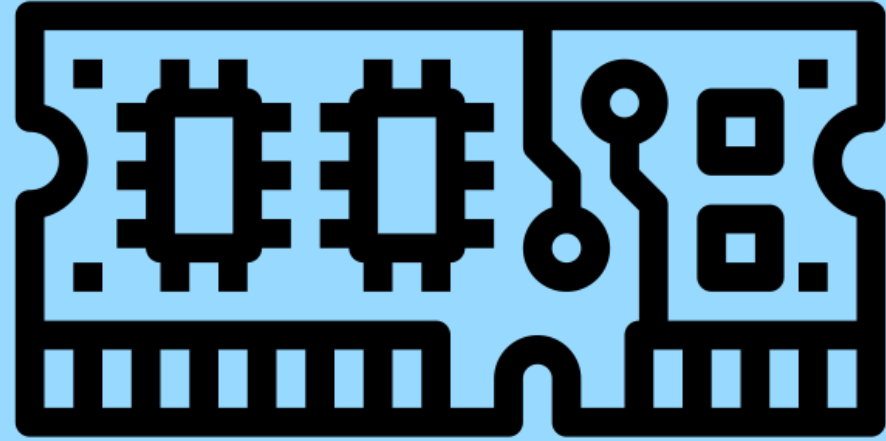
- Pay for each running instance, whether it's being used or not
- Have to manage number of instances depending on load
- Have to pay salaries for humans to figure those two things out

Serverless (Lambda)

- Pay-per-use
- Have to consider the resource requirements...

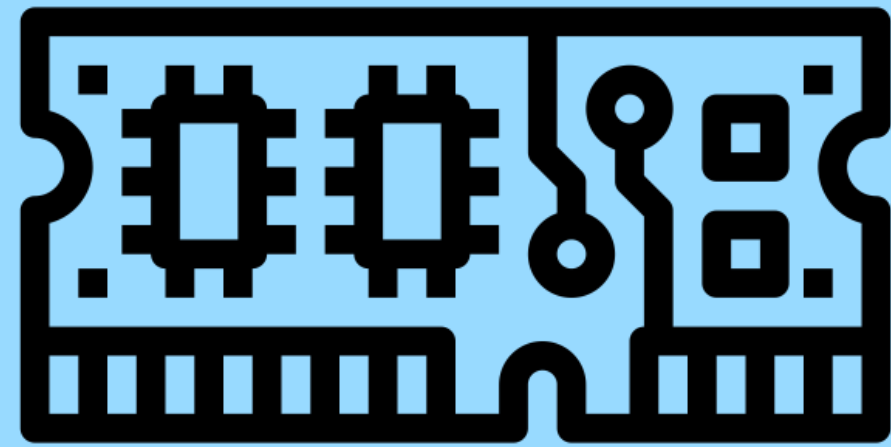
Resource requirements

What are you actually paying for?

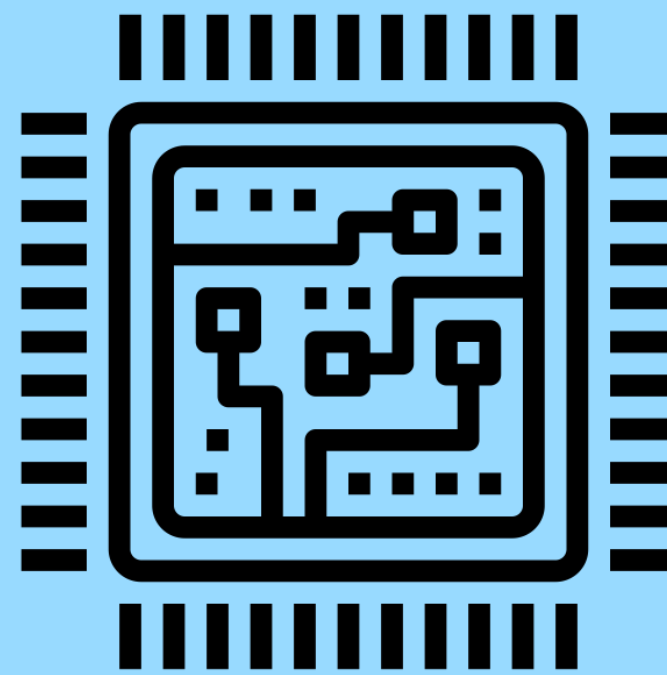


Memory
(RAM)

What are you actually paying for?

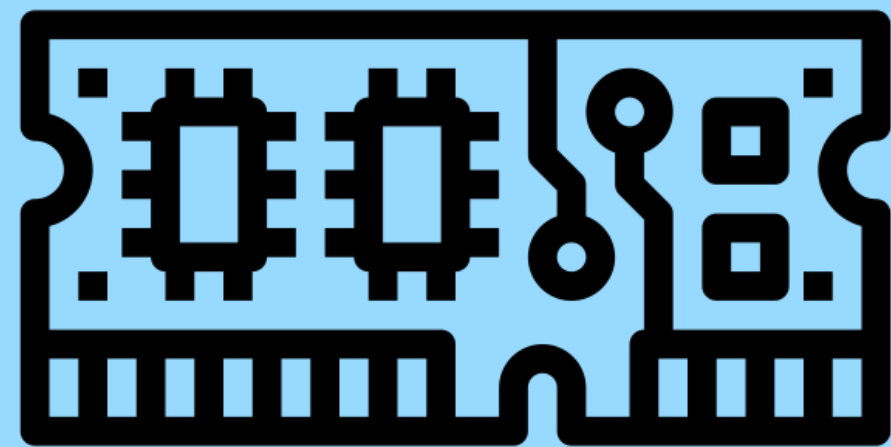


Memory
(RAM)

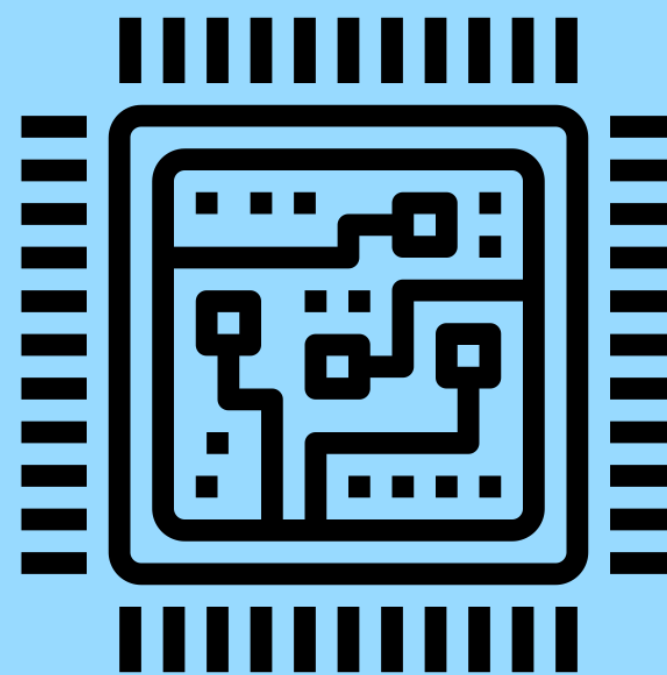


Processor
(CPU)

What are you actually paying for?



Memory
(RAM)



Processor
(CPU)



Time
(Execution)

Don't forget cold-starts...

In the context of Lambda...

Couplets of memory and processor, per 100ms of time consumed.

"It's very affordable. If your functions are short and optimized, it's a cost-savings."

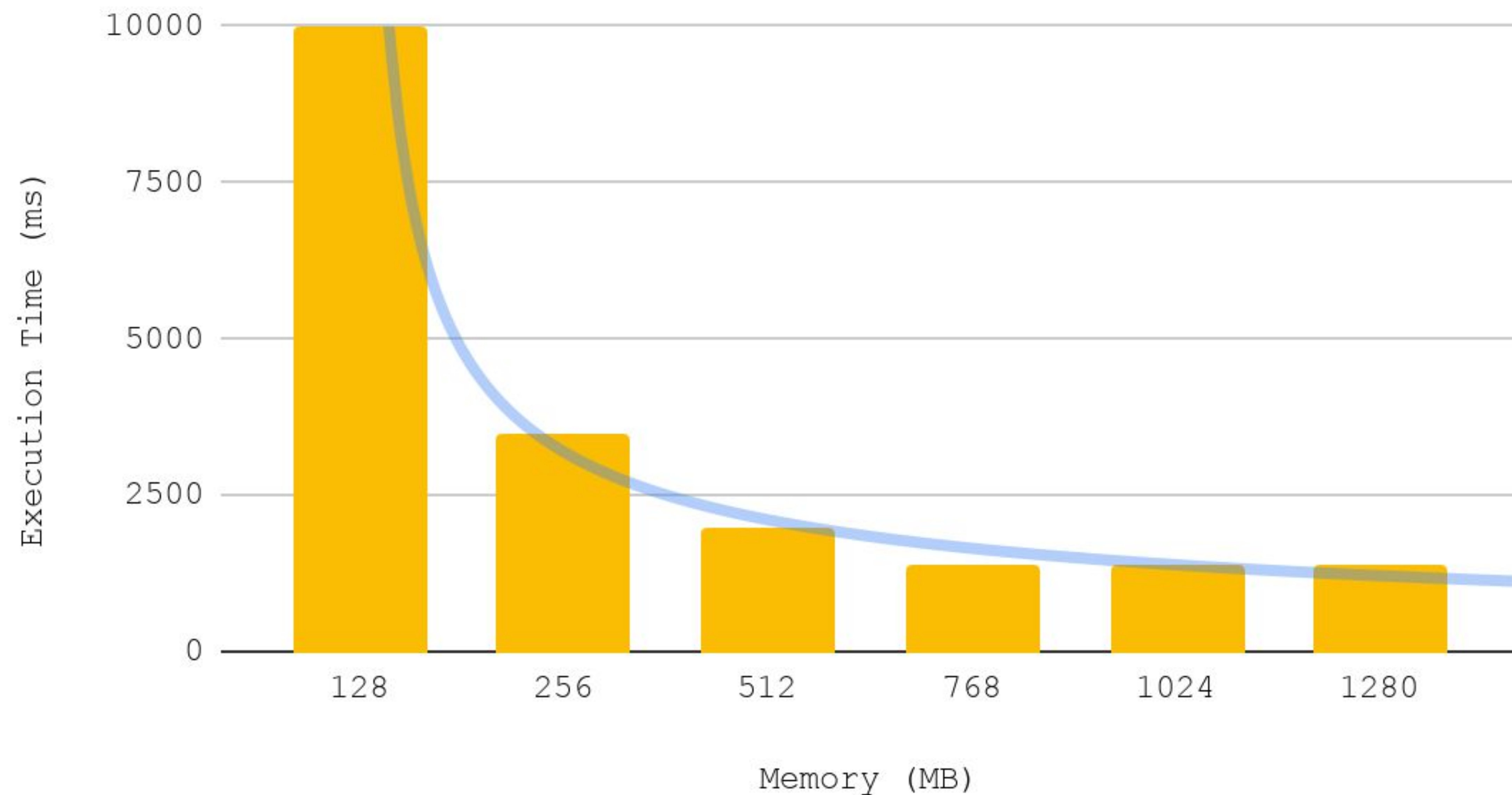
– Reza Javidi



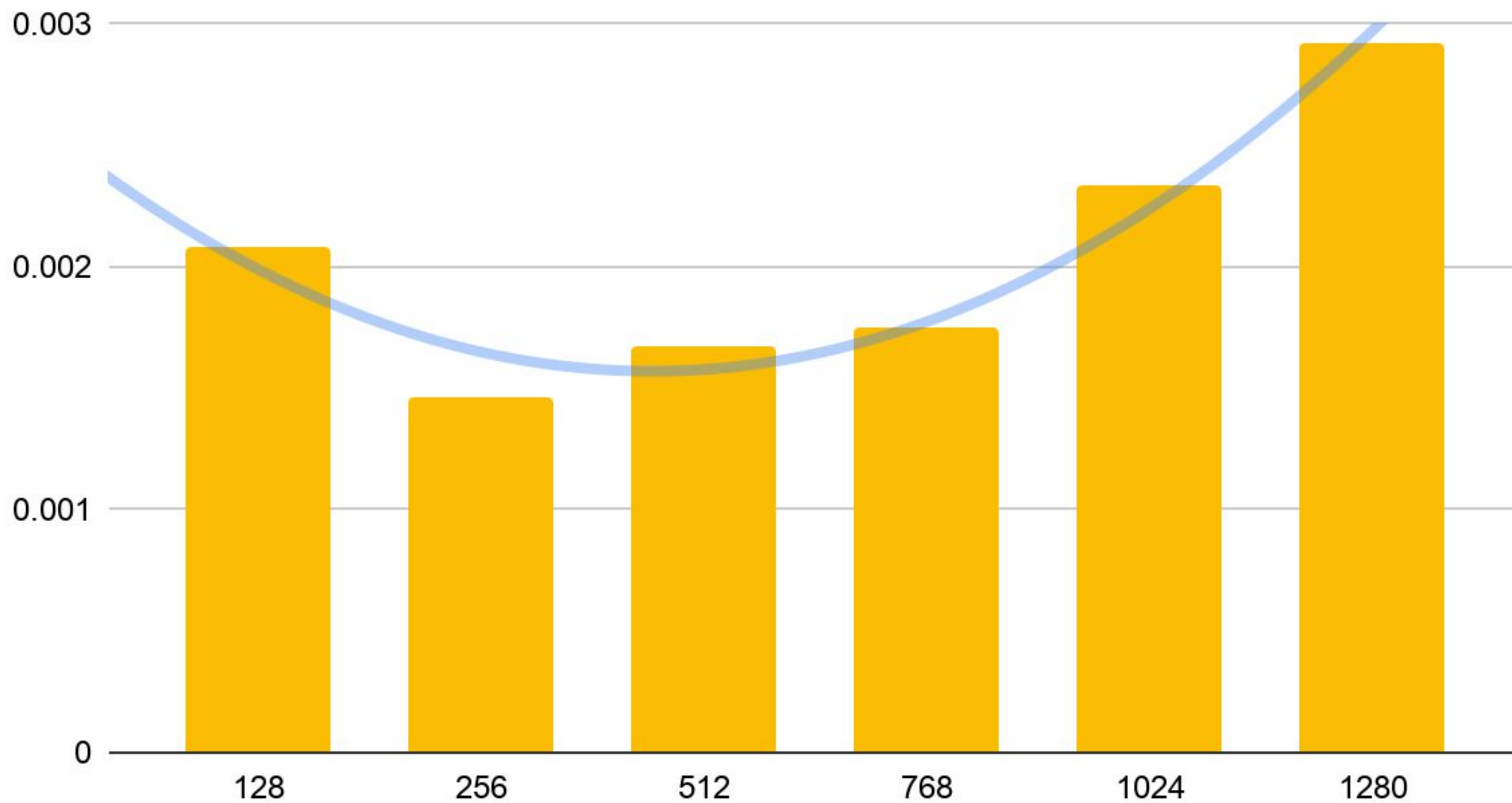


Details, please.

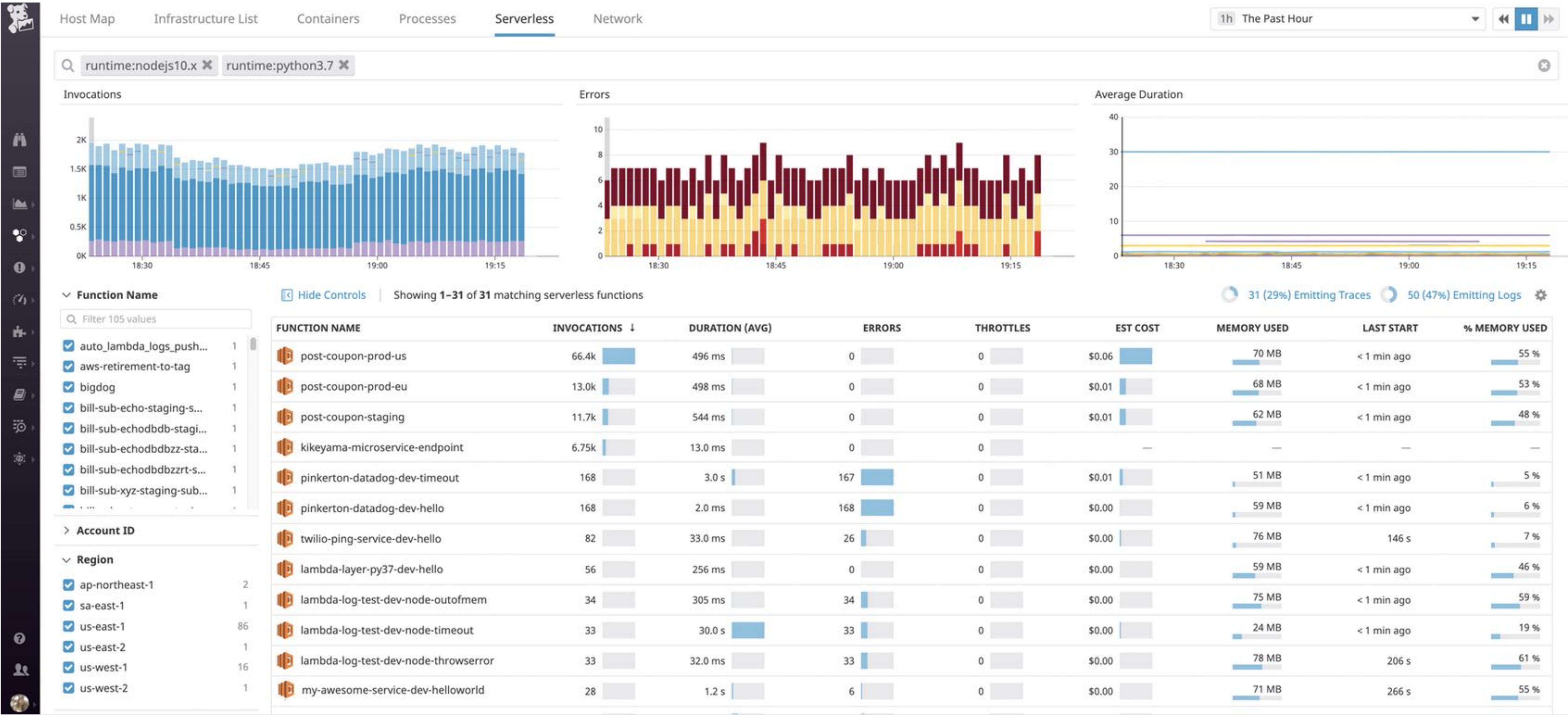
Lambda Memory vs. Execution Time (cost)



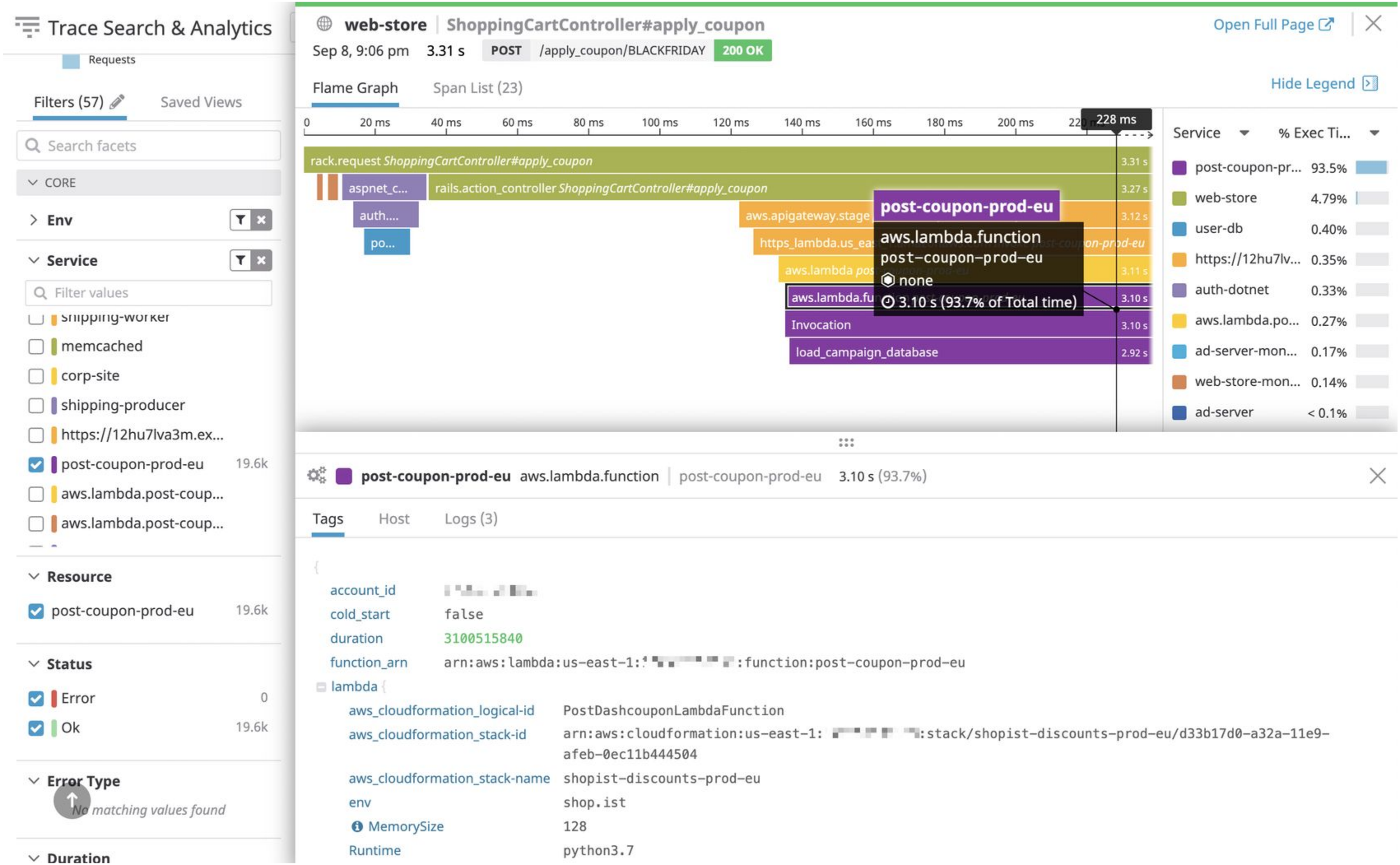
Cost per function call



Serverless Framework



Serverless Framework



"[We] do weekly reviews of our functions to make sure they are behaving correctly."

– Reza Javidi



The background is a solid green color. It features several thin, light green lines that intersect to form a large, faint white triangle. The triangle's vertices are located at approximately (200, 330), (550, 0), and (850, 1000) in normalized coordinates. The text "That's neat!" is centered horizontally and partially overlaps the triangle.

That's neat!

Come chat with
us at our booth!



DATADOG