

# Monitoring Network Traffic in Kubernetes

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DATADOG

# What is Datadog?

## Observability platform

- Metrics
- Distributed traces (APM)
- Log analytics
- Synthetics
- Network Performance Monitoring

<http://datadoghq.com>





Scaling is hard

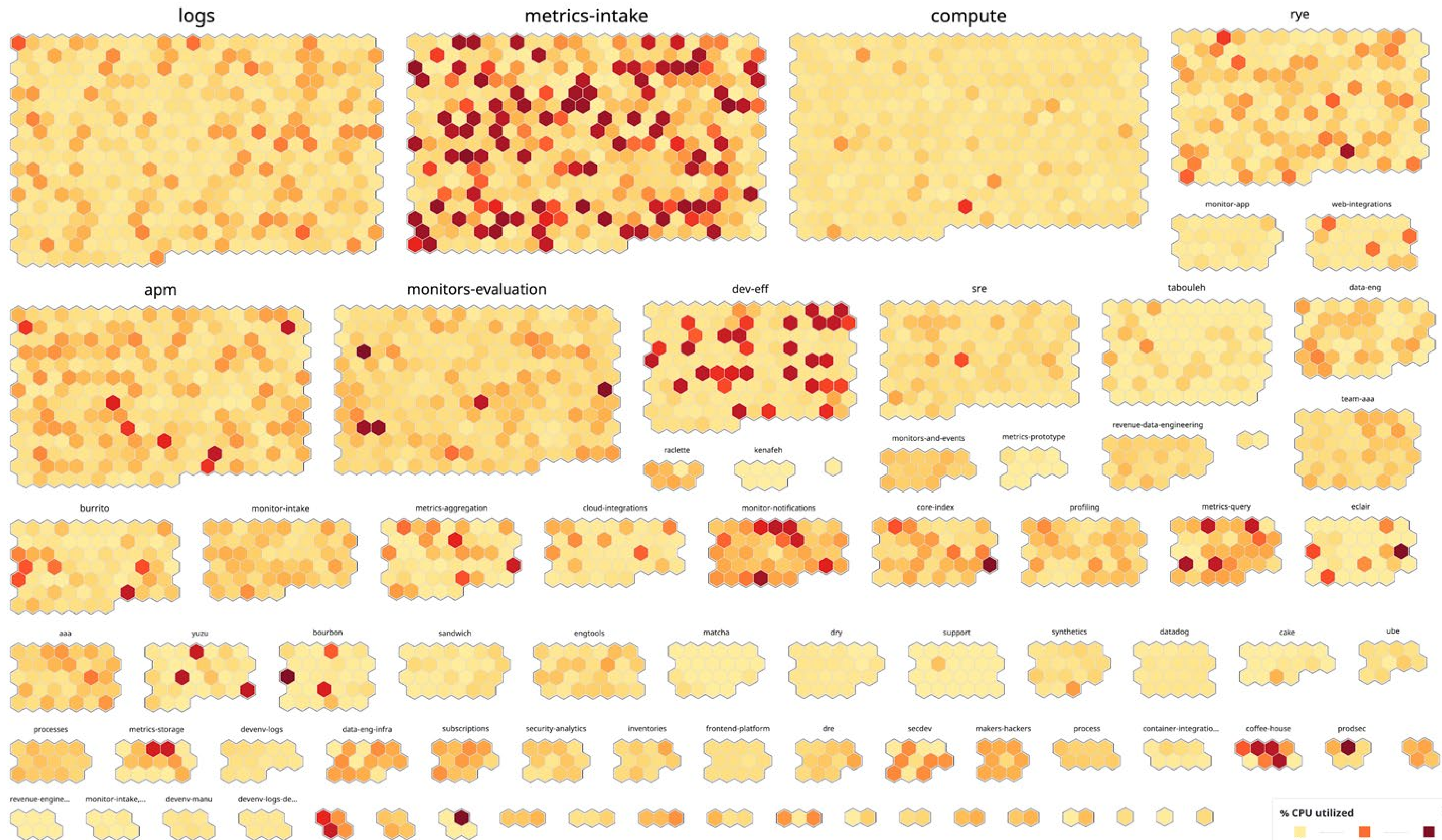


More capacity?  
Add another rack!



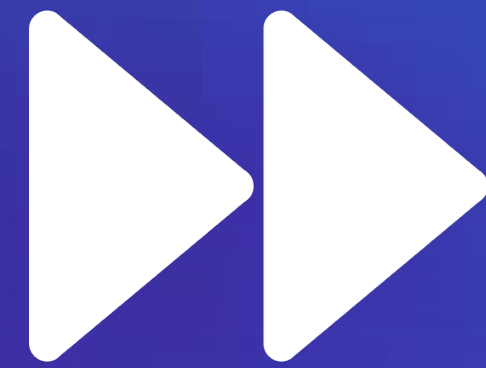
The background of the image is a dramatic sky filled with large, dark, billowing clouds. The clouds are illuminated from the side, creating bright, sunlit edges and deep shadows, giving them a three-dimensional appearance. The overall color palette is dominated by dark blues and greys for the cloud bodies, with bright whites and yellows at the sunlit edges.

The Cloud!

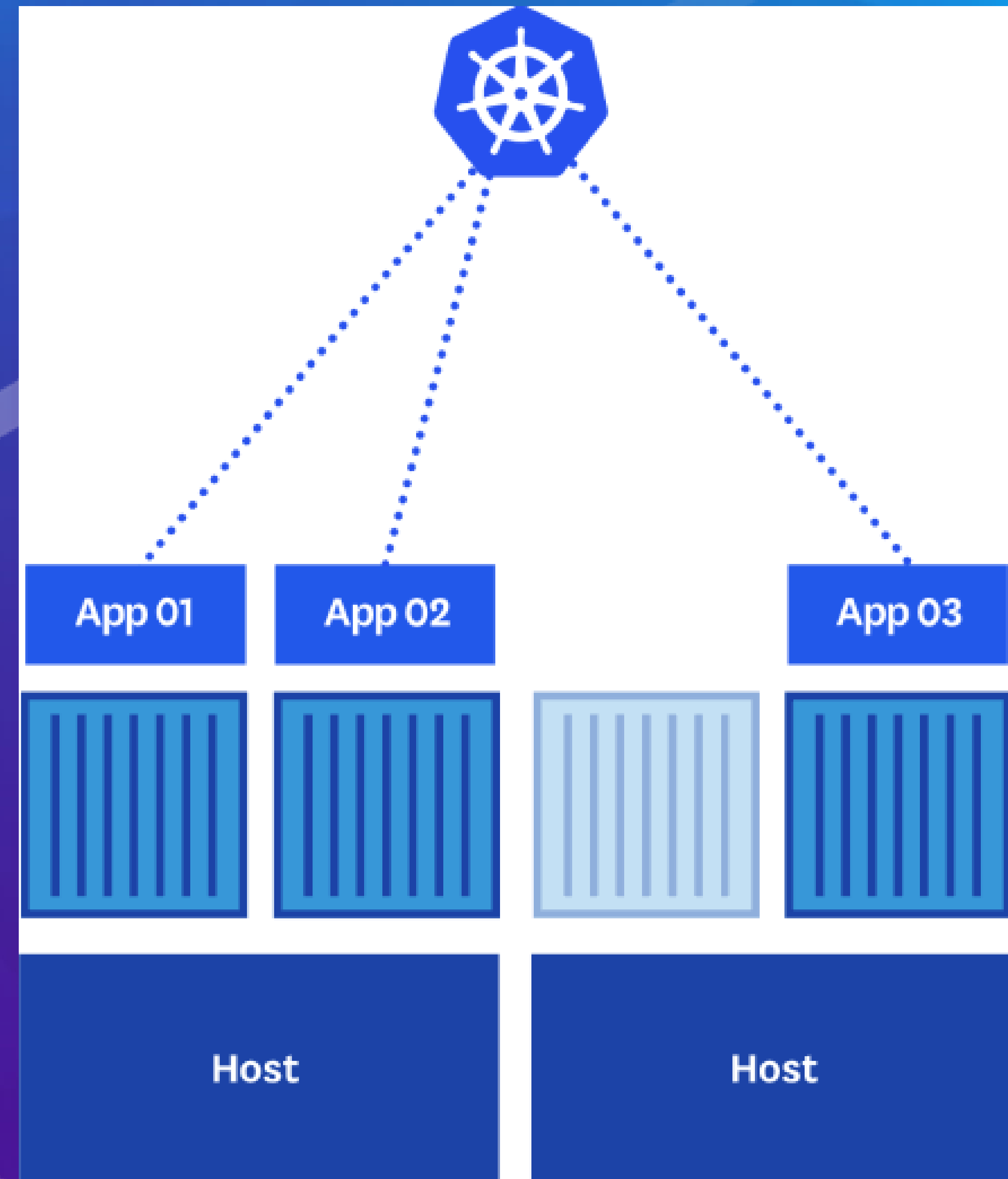




# Fast Forward



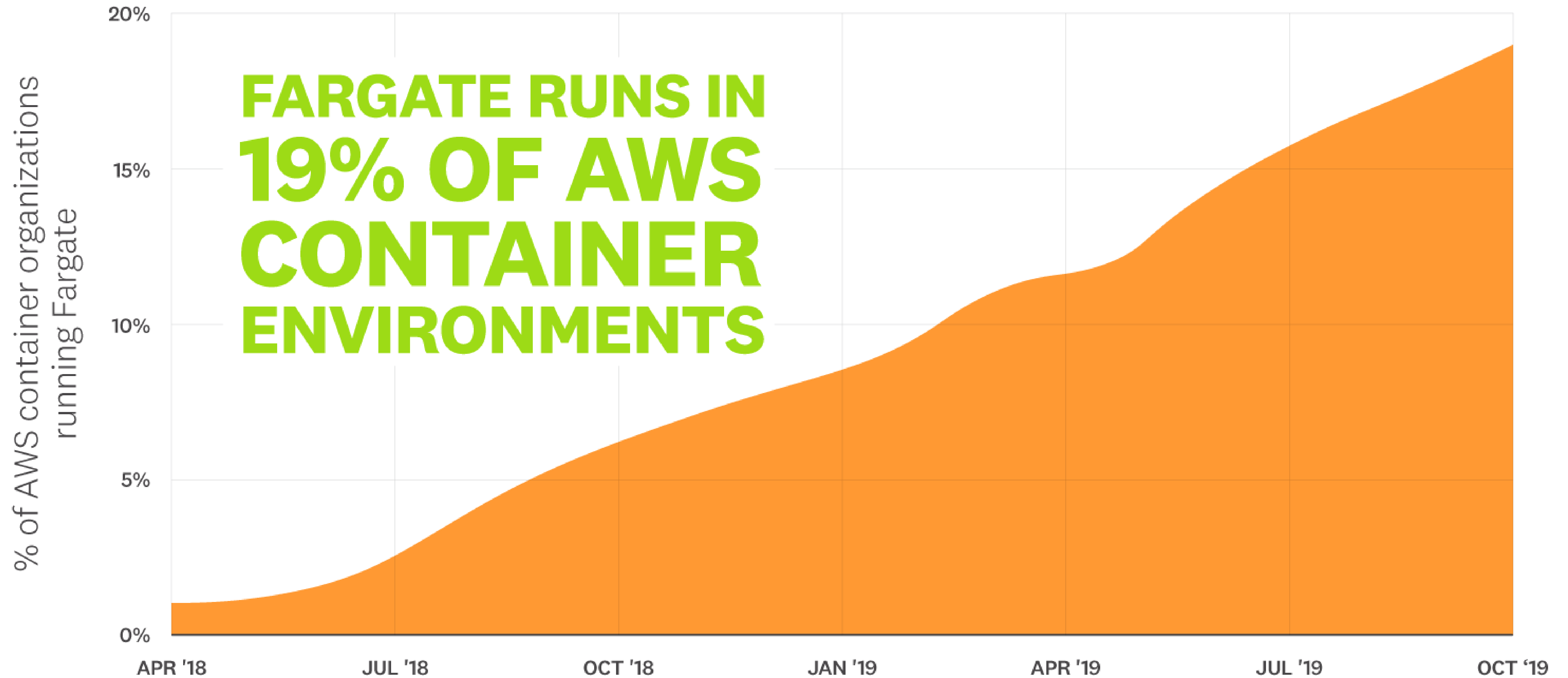
It's alive!







# Fargate Share among AWS Container Organizations



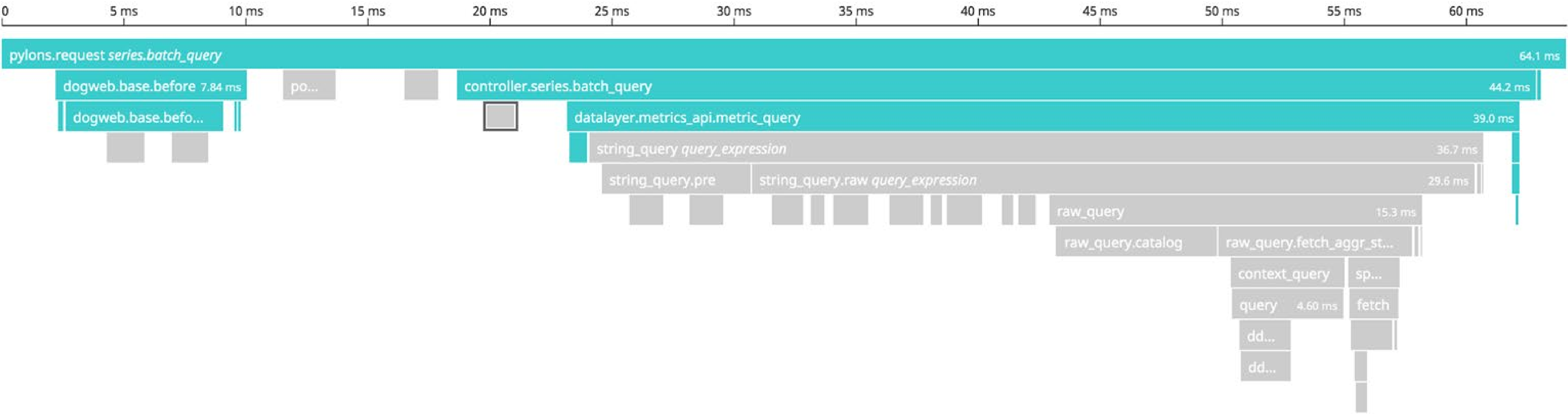
Source: Datadog

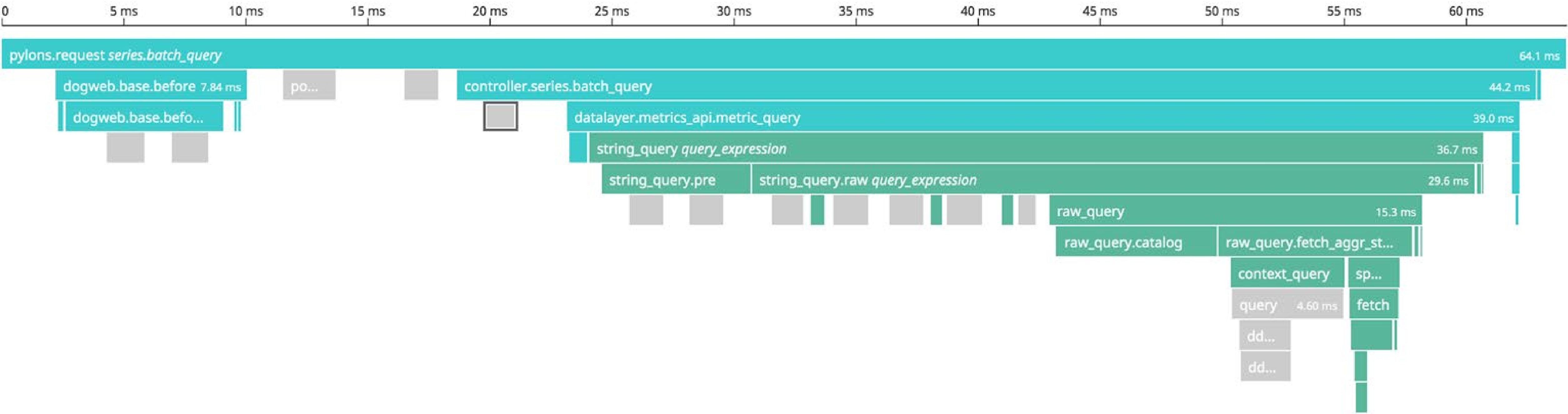




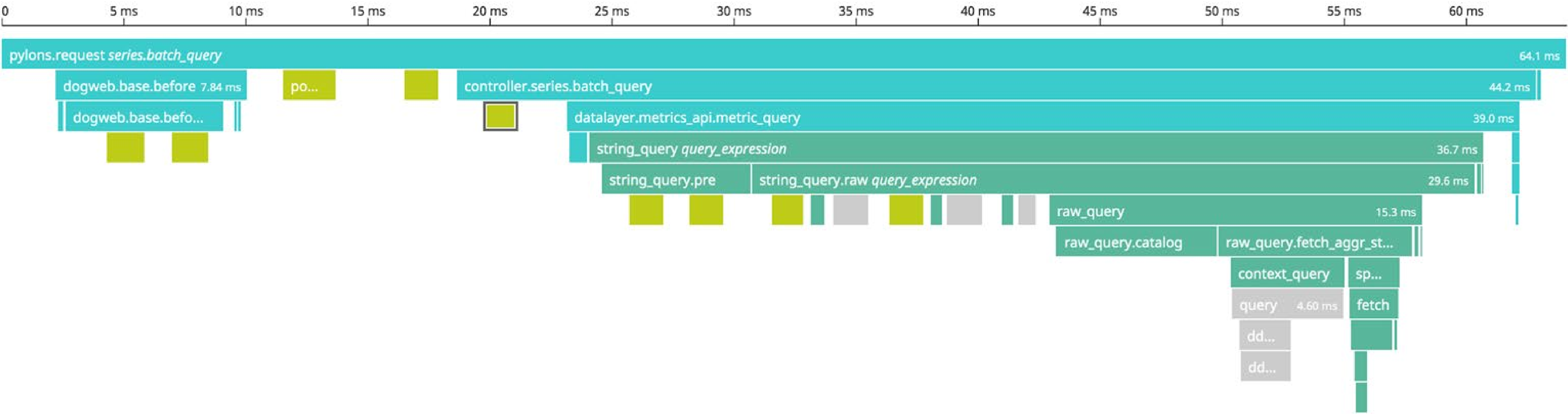


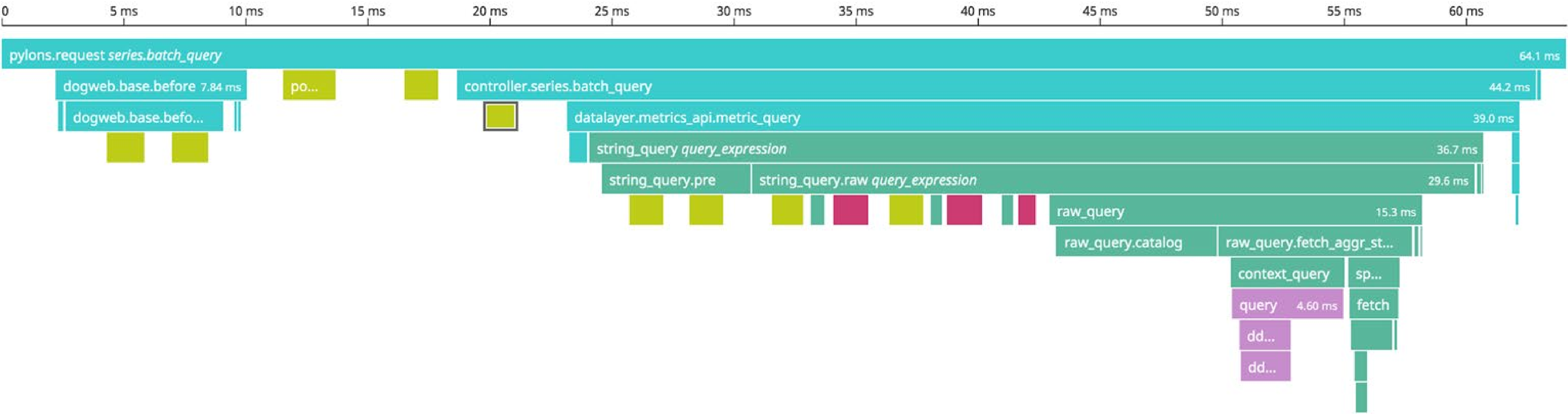
# Growing Dependencies

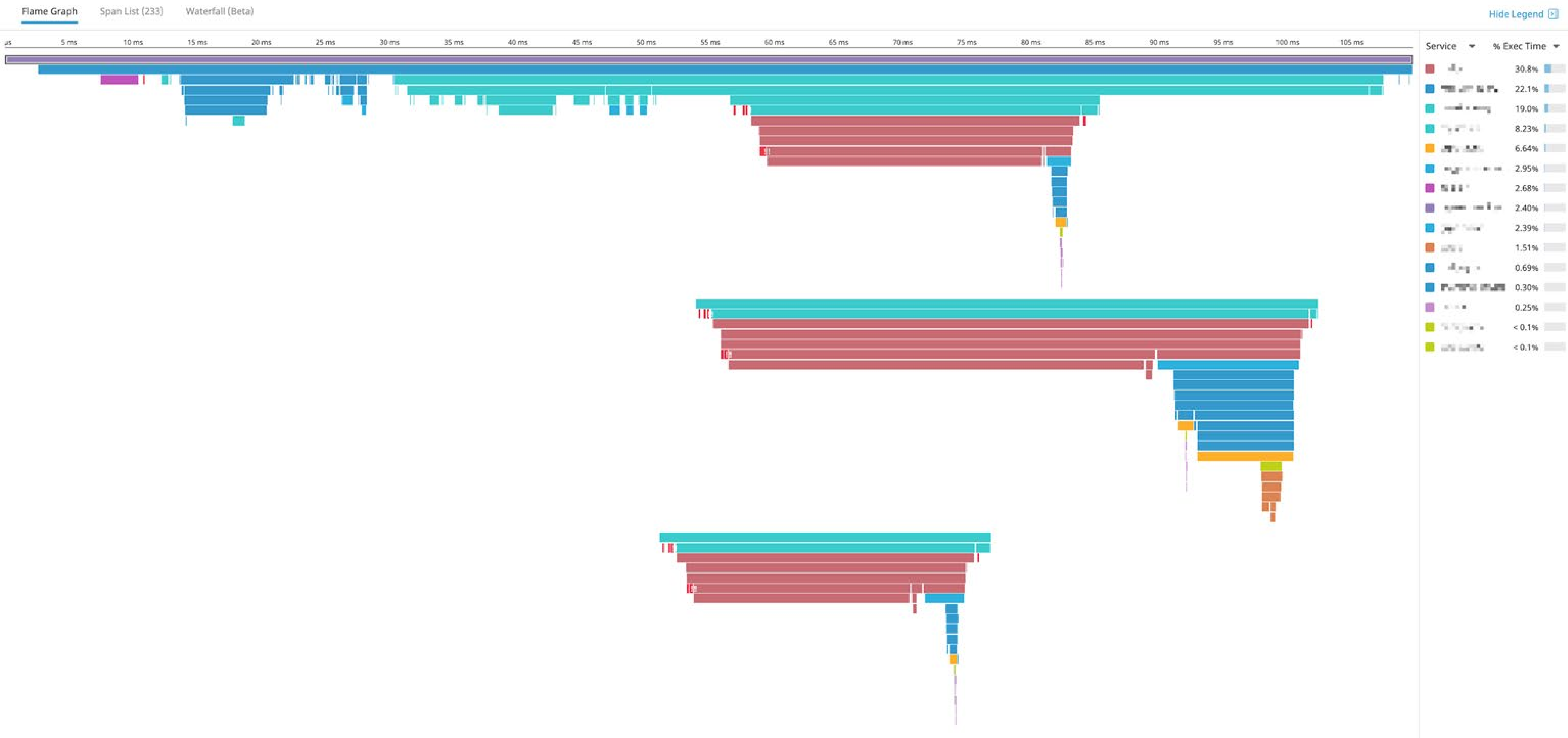














# AWS App Mesh

# Layer 7 Routing in a Layer 7 World

- Fully managed
- Pod-local service to service routing
- API driven configuration
- Introspection



# Datadog Network Performance Monitoring

# Network Performance Monitoring

- Layer 3/4 monitoring of flows
- eBPF based – extremely low overhead
- 100% visibility, no sampling
- Flows are meaningfully resolved, not just IP/port

# Still computers in the cloud

- Increasingly method calls now imply network traffic
- Lower layer routing decisions are invisible
- Container and pod routing is complicated & opaque
- Errors can be in code, in physical resource capacity, or in communication

The background is a solid green color. It features several thin, light green lines that intersect to form a large, abstract geometric shape. A prominent white triangle is positioned in the upper left quadrant, with its base extending towards the left edge and its apex pointing towards the top center. The word "Demo" is written in a large, white, sans-serif font, positioned to the right of the white triangle's base.

Demo



# Monitoring in the driver's seat

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External metrics provider for  
the Horizontal Pod Autoscaler

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NEW and open source:  
Watermark Pod Autoscaling

<https://github.com/DataDog/watermarkpodautoscaler>

# Thank you

