Lighter-weight Virtualization for Edge Computing

@zackbloom
Easy Way to Run Functions + Autoscaling
Every Serverless Function has its own container, its own process.
10 uS per context switch * 100,000 requests per second = 1 CPU second spent... every second

No actual work is getting done
~33% of time spent handling interrupts and security
Cold Starts: It takes **500ms - 10s** to start a Node Lambda.
A better developer experience built on forty year old tools
Let’s Start Over
Goals

- Run code on distributed machines, in a safe isolated way
- Consume only the memory required by our code
- Spend all of our CPU time on our code
- Make scaling across regions trivial
Runs untrusted isolated code
Minimal memory overhead
Starts running new code fast
No VMs
No Containers
Millions of Functions
- 3x More Compute per $
- 10x Less Memory (35 MB -> 3 MB)
- 100x Lower Cold-Start Time (500 ms -> 5 ms)

Functions start and scale in 5 ms
No Regions
No Availability Zones
Hundreds of Data Centers
Instant Auto Scaling
No Ops, No SRE
The Future
Entire applications will run on ‘the Internet’
Just Write Code.
https://workers.cloudflare.com
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