

An aerial photograph of a city, likely Dubai, with a blue overlay. A large white 'okta' logo is positioned on the left side of the image. The background shows a dense urban landscape with many skyscrapers and a complex network of roads and highways. A large, semi-transparent blue circle is visible on the right side of the image, partially obscuring the city view.

okta

# Load Testing the Hard Way

(with JMeter and DigitalOcean)

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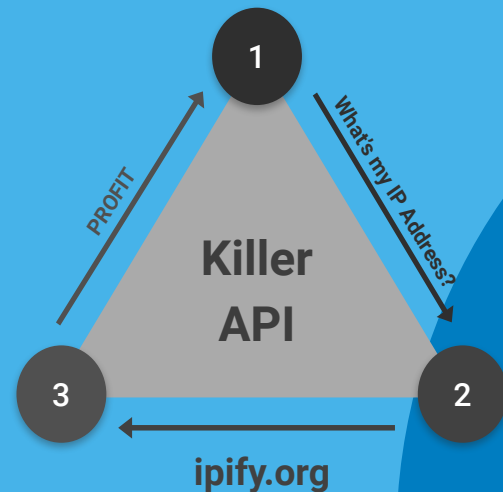
August 20, 2019

# Welcome!

- Agenda
  - The Challenge (2 min)
  - Distributed JMeter (2 min)
  - Digital Ocean (2 min)
  - The Solution (2 min)
  - Docker (2 min)
  - Load Testing the Hard Way (20 min)
  - Okta Overview (5 min)
  - Questions (10 min)

## The Challenge:

- You expect your killer API to have millions of users.
- You want to make sure that your killer API can handle the traffic.



**Professional Load Testing Cost: \$30,000**



APACHE

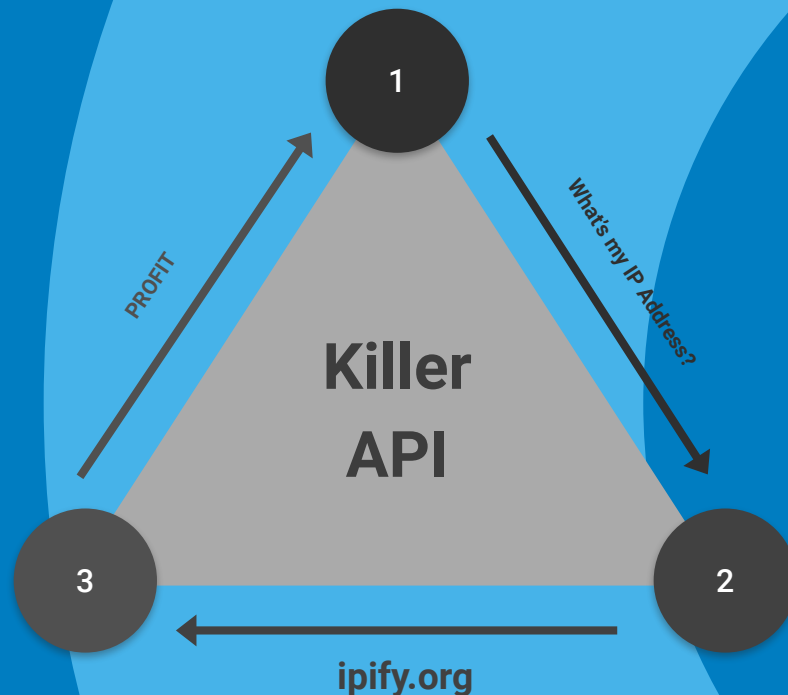
**JMeter**™



DigitalOcean

# JMeter + DigitalOcean

- 200 “users” per JMeter server
- 100 JMeter servers
- JMeter servers could be in different regions
- 20,000 simultaneous requests



100 - 8GB, 4CPU Droplets =  $\$0.06 \times 100 = \$6$  / hour

1 - 8GB, 4CPU Droplet =  $\$0.06$  / hour

**Total cost for 100,000,000 requests = \$6.06**





docker

# The Hard Way



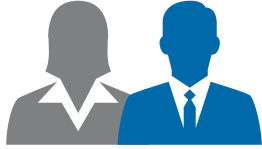
# The Hard Way Components:

- Spring Boot
- Apache HTTPClient
- DigitalOcean API
- SSH
- Distributed JMeter

## **The Hard Way Process:**

1. Create  $n$  DO server droplets
  - a. confirm all created
2. Wait for all server droplets to be active
3. Add all server droplets to firewall
4. Start JMeter on all server droplets
  - a. confirm JMeter started on all
5. Create DO client droplet
  - a. confirm created
6. Wait for client droplet to be active
7. Add client droplet to firewall
8. Push test plan to client droplet
9. Start JMeter on client droplet
  - a. confirm JMeter started

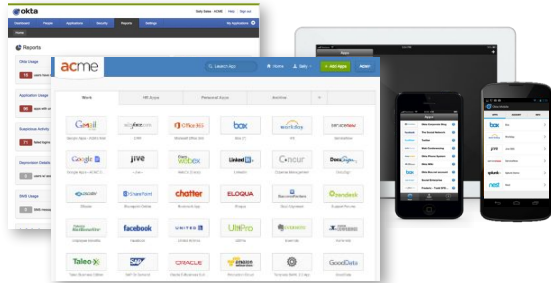
# Okta Enables Companies to Do Both IT & API



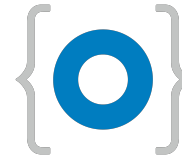
Employees,  
Contractors



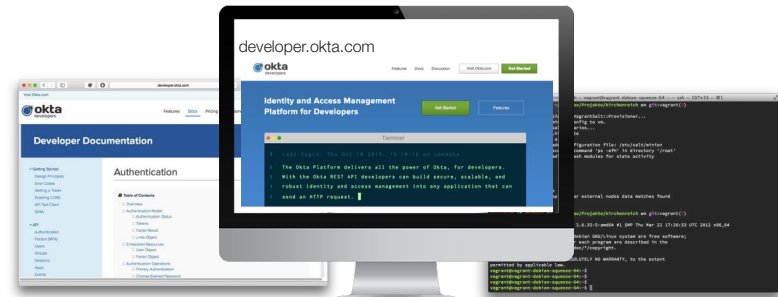
**Identity & Mobility Service:**  
Identity Management  
Mobility Management  
Strong Authentication



Partners,  
Customers



**Identity API Products:**  
Identity API for Any App  
Developer Tools  
and Community



# Resources

- Twitter - @afitnerd @OktaDev
- JMeter - <https://jmeter.apache.org/>
- Docker - <https://www.docker.com/>
- <https://ipify.org>
- Digital Ocean API
  - [developers.digitalocean.com/documentation/v2](https://developers.digitalocean.com/documentation/v2)
- Docker + JMeter - <https://github.com/ajeetraina/jmeter-docker>
- Free Okta Org for Developers - <https://developer.okta.com/signup>
- Okta Training - <https://www.okta.com/services/training>
- [github.com/dogearred/codercruise-2019-load-testing-the-hard-way](https://github.com/dogearred/codercruise-2019-load-testing-the-hard-way)
- [github.com/dogearred/load-testing-the-hard-way-example](https://github.com/dogearred/load-testing-the-hard-way-example)



The background is a vibrant blue with a dynamic, radial pattern of light streaks emanating from the center. Overlaid on this are several semi-transparent, concentric circles of varying sizes, creating a sense of depth and movement. The Okta logo is centered in the upper half of the image.

# okta

Thank You