

GOTO London 2015

War of the Platforms

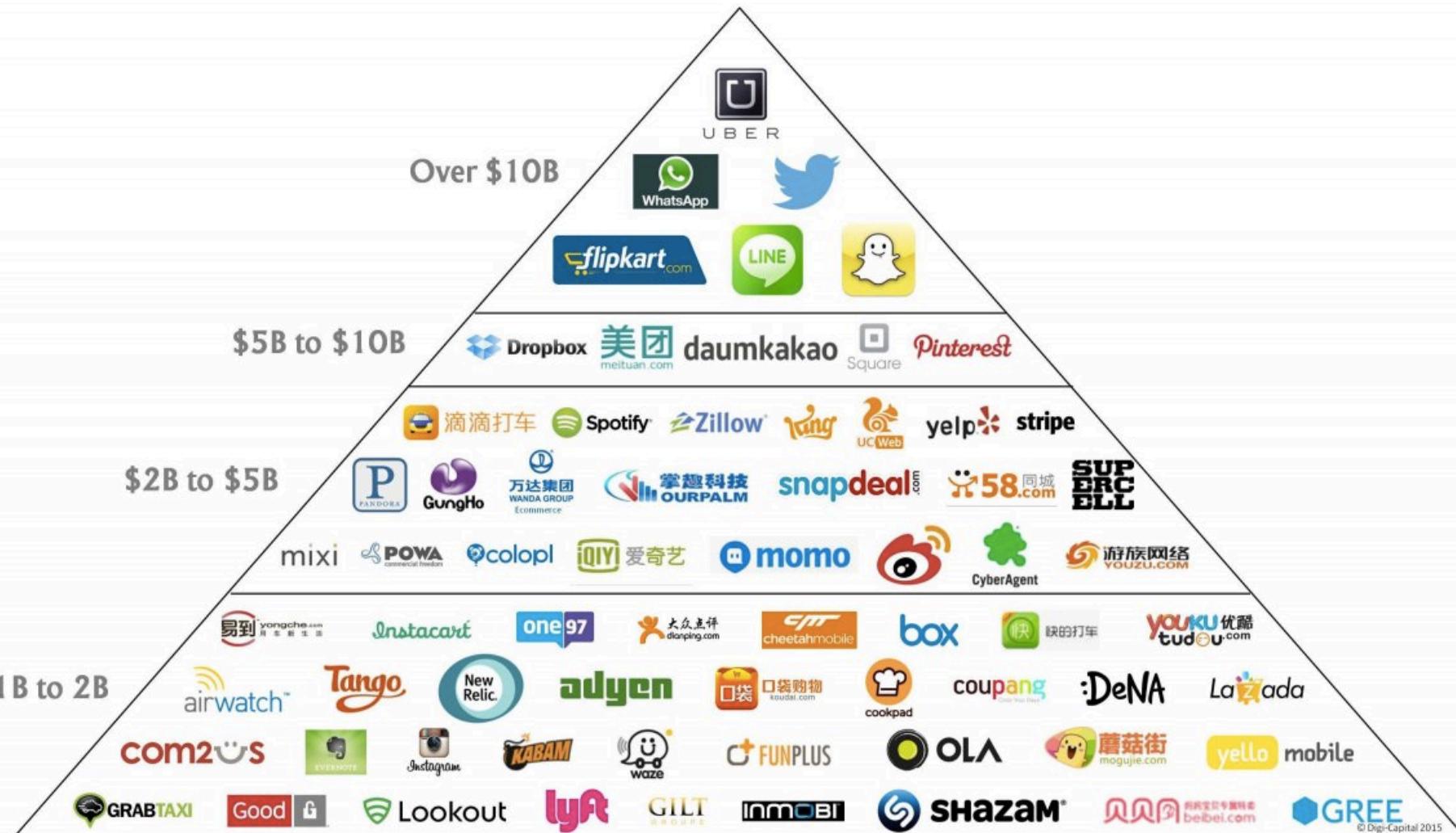
Alexis Richardson

Who am I



Agenda

- Can I go faster with *technology*?
- Yes
- Cloud Native:
 - The economics of convenience
 - The war of the platforms – what's at stake
 - What's missing? Weave and Observability

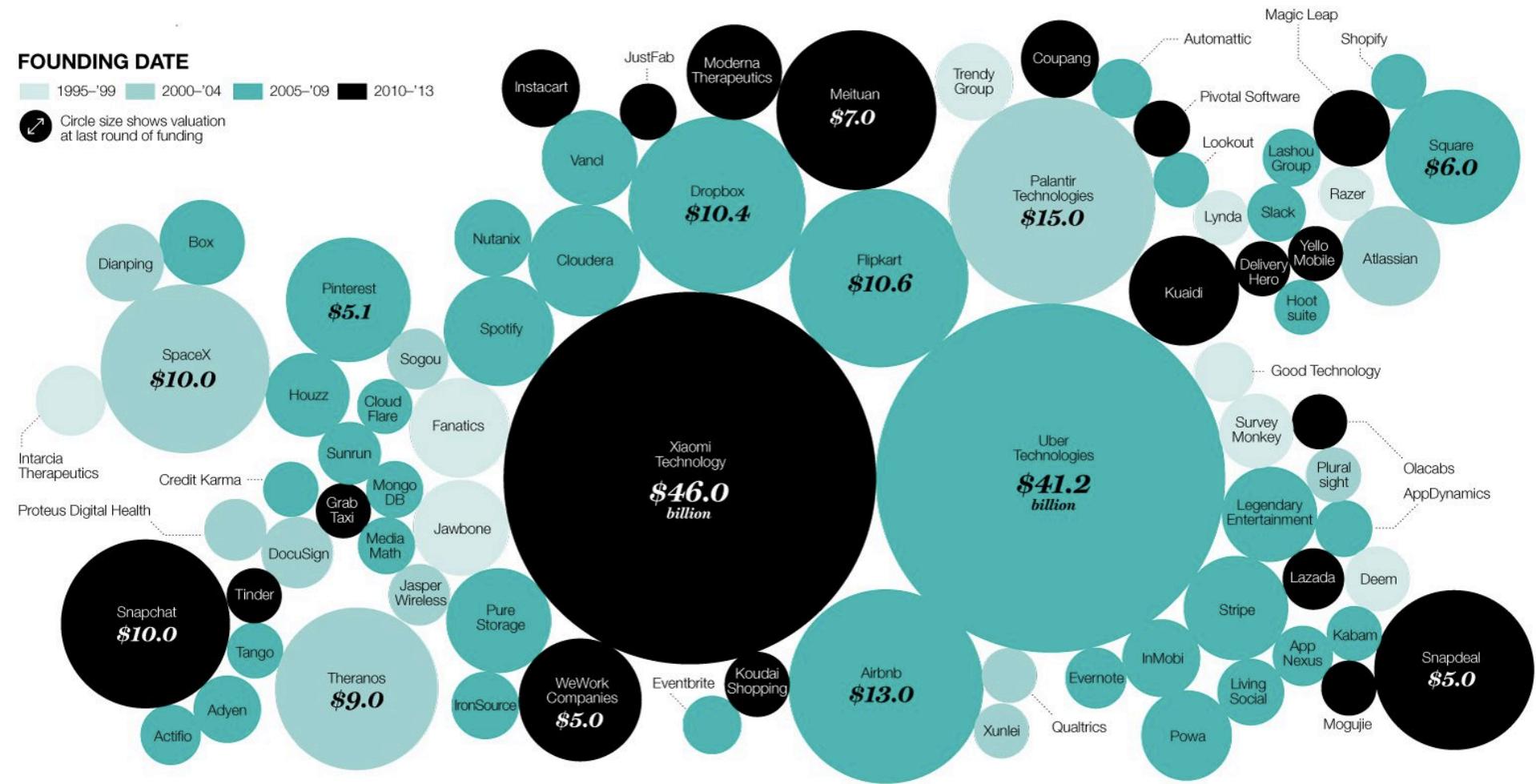


Digi-Capital™

FOUNDING DATE

1995-'99 2000-'04 2005-'09 2010-'13

Circle size shows valuation at last round of funding













- 1 **Sletoh**
- 2 **Songkick**
- 3 **School Of Everything**
- 4 **Habit Industries**
- 5 **Zolmo**
- 6 **Wordia**
- 7 **Last.FM**
- 8 **Whosampled**
- 9 **Tipped**
- 10 **Kizoom**
- 11 **Really Interesting Group**
- 12 **My Neighbourhoods**
- 13 **Diary.com**
- 14 **Display**
- 15 **TweetDeck**
- 16 **MOO**
- 17 **StylistPick**
- 18 **Onefinestay**



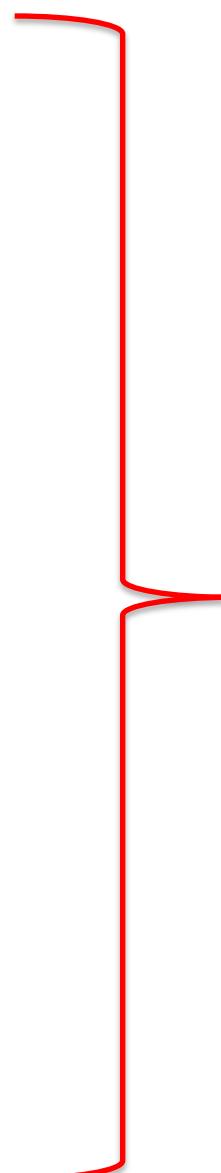




Actually, it's already a word.

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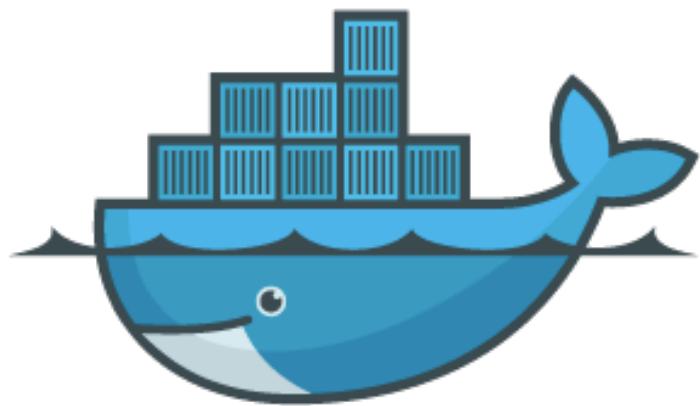


GET CLOUD NATIVE

Let's play cloud bingo!

Cloud	Agile	Social	Netflix	Big Data
Disruptive	Microservices	Docker	@adrianco	Go
Developers	Lean Startup	Cloud Native	Continuous Deployment	Rugged
Hack	Velocity	Unicorn	PaaS	Mesos
Analytics	Innovate	Internet of Things	Uber of X	Mobile

THE ECONOMICS OF CONVENIENCE



docker

From Containers to Cloud Native

Next few years...

- Microservices support and agile-enabling tech is core to the platform, not a bolt-on
- Container-centric application architectures
- Management is Much More Automated

Domain Specific Tools

storage
api

app services
eg: DB, MQ

infra services
eg: log, monitor

PaaS & app
lifecycle

microservices
(eg: netflixoss)

CI/CD

Container Service

Automated Infrastructure

Do what you like – no regrets

Automated Infrastructure

Container Service

Portable to any infrastructure
Standard execution model using containers

Domain Specific Tools

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microservices
(eg: netflixoss)

CI/CD

Pick the tools that make your development team fastest
Whether agile/rugged or hybrid/legacy

WAR OF THE PLATFORMS

Debates, Battles, Wars

- Container vs VM vs mix?
- Unstructured PaaS vs Structured PaaS
- Opinionated vs Un-opinionated

“structured PaaS”

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Container Service

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“structured PaaS”

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CI/CD

Contain

Automated In

“unstructured PaaS”



storage
api

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microservices
eg: netflixoss)

CI/CD



kubernetes
by Google

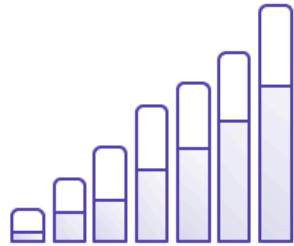
A



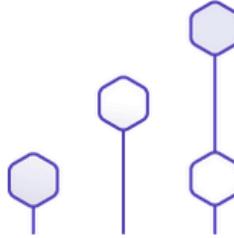
mesosphere

e

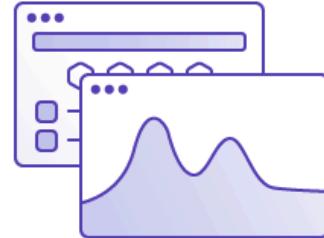
“opinionated PaaS”



8 Billion Requests per Day



5+ Million Apps Created



150+ Add-on Services

Everything you need to
build, run, and scale



Dynos

Run virtually any language at
any scale.

“un-opinionated PaaS”

Domain Specific Tools

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CI/CD

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“un-opinionated PaaS”



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CI/CD

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CONVENIENCE REQUIRES CHOICE



Microservice Concerns

Tooling

Configuration

Discovery

Routing

Observability

Datastores

Operational: Orchestration and Deployment Infrastructure

Development: Languages and Container

Colonel Boyd USAF, on Combat



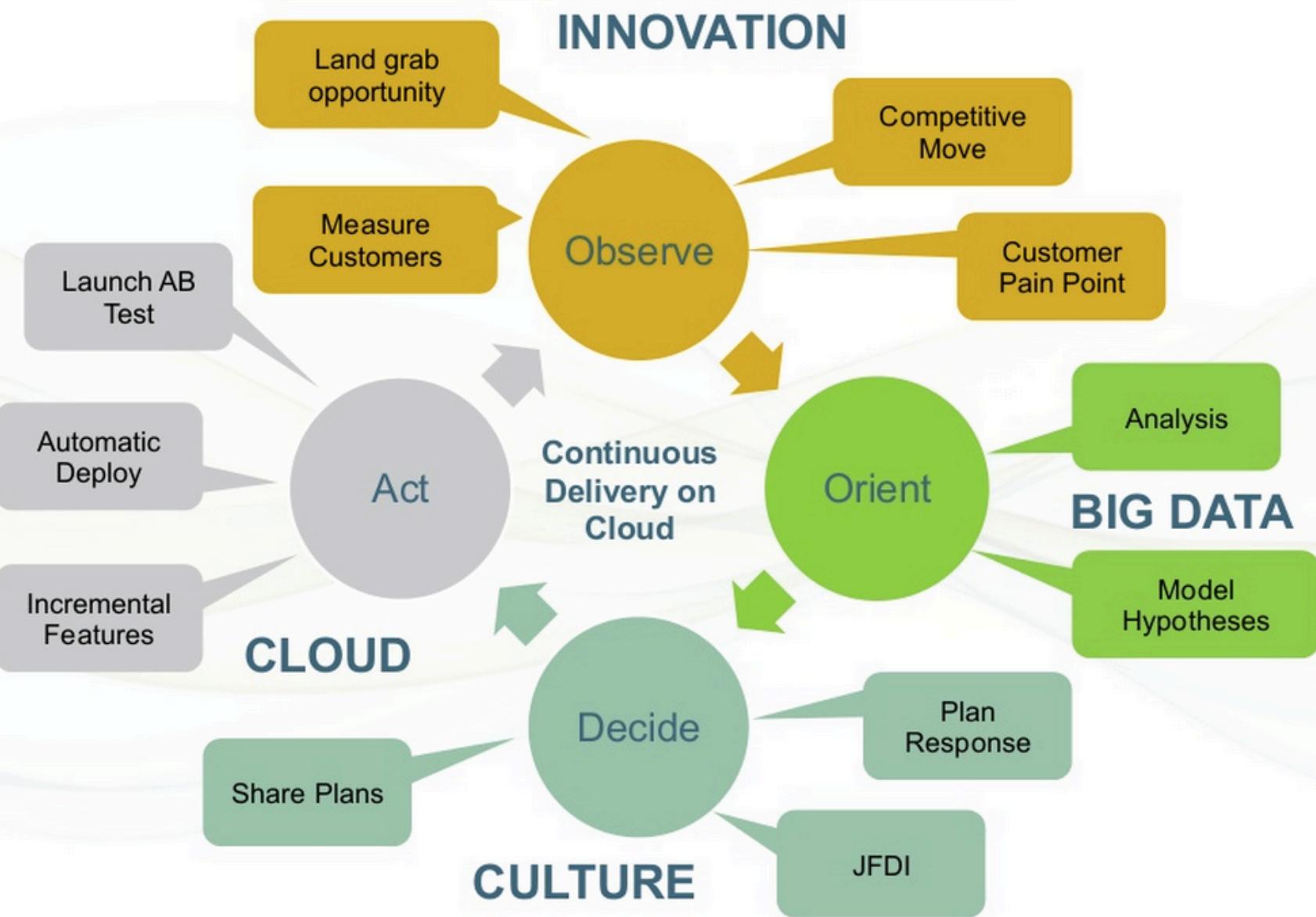
“Get inside your
adversaries' OODA
loop to disorient them”

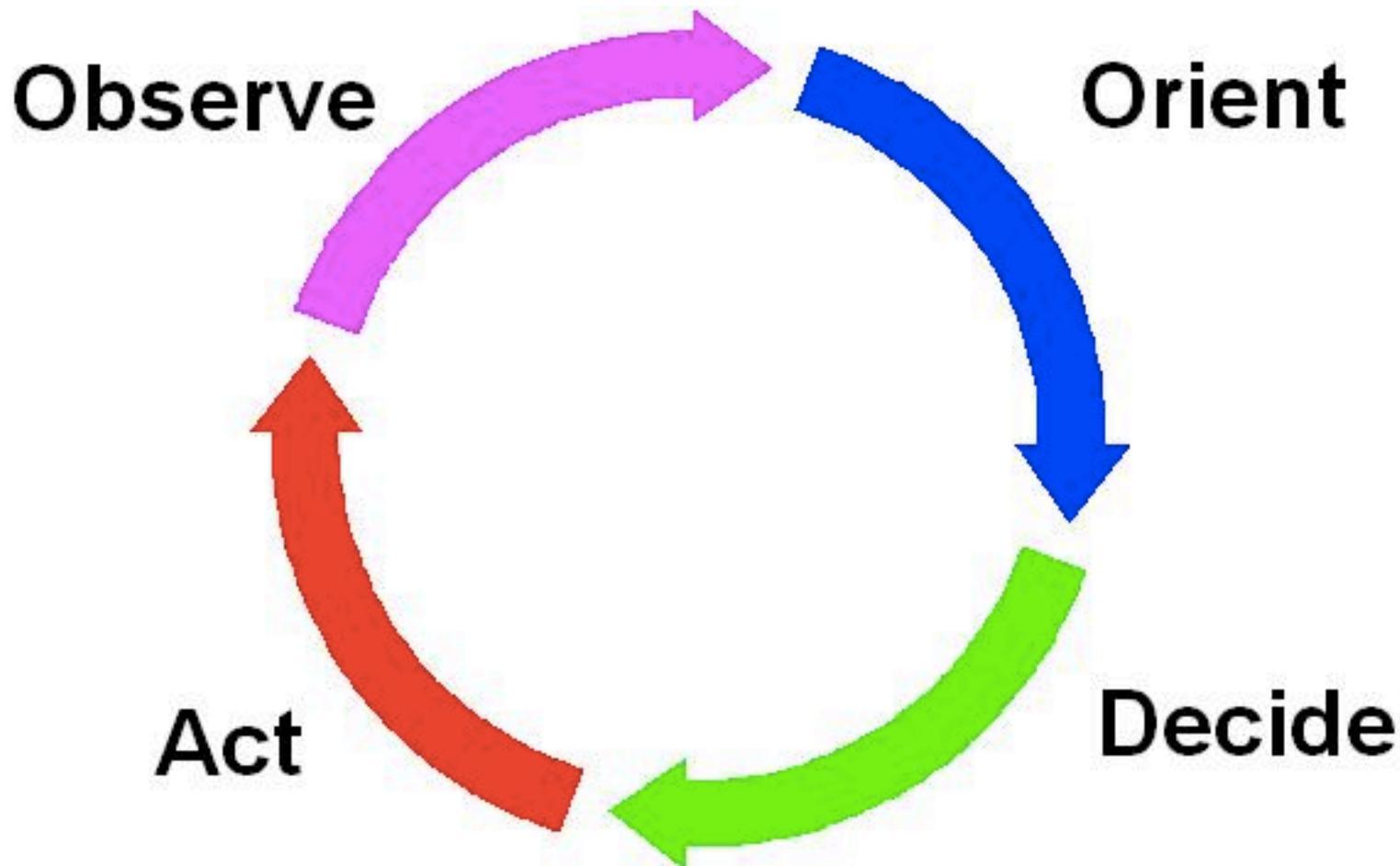
Observe

Orient

Decide

Act





Slow OODA loop = death

Fast OODA loop = success

THE PLATFORM IS THE PROCESS

Connect – Observe – Control

- Orient & Observe
 - Is my app healthy?
 - Is my app in the same state as yesterday?
 - Is it my app, or the platform, or something else?
- Decide & Act
 - Is this sufficiently important?
 - What should I do about it?
 - Who should do it?

Connect – Observe – Control

- Orient & Observe
- Decide & Act
- And.. because Cloud Native is so new
 - **How do I even get started?**



Cloud Native made magically simple.

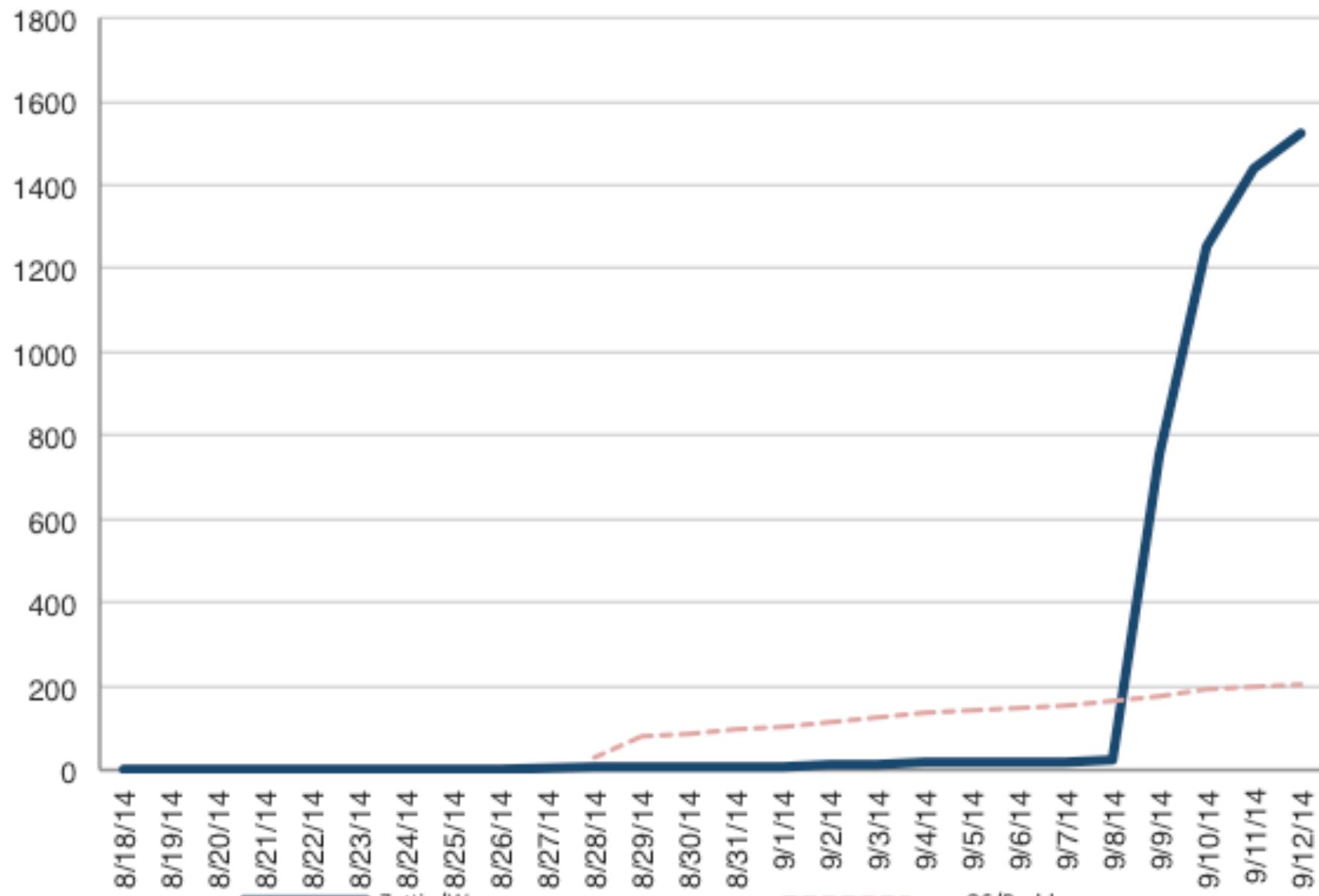
- Easiest way to get started!
- Any platform. Any app. Anywhere.
- No changes. No surprises.

Connect, Observe and Control your apps

“Weave Net makes it as easy as possible for developers to create a network of Docker containers.”

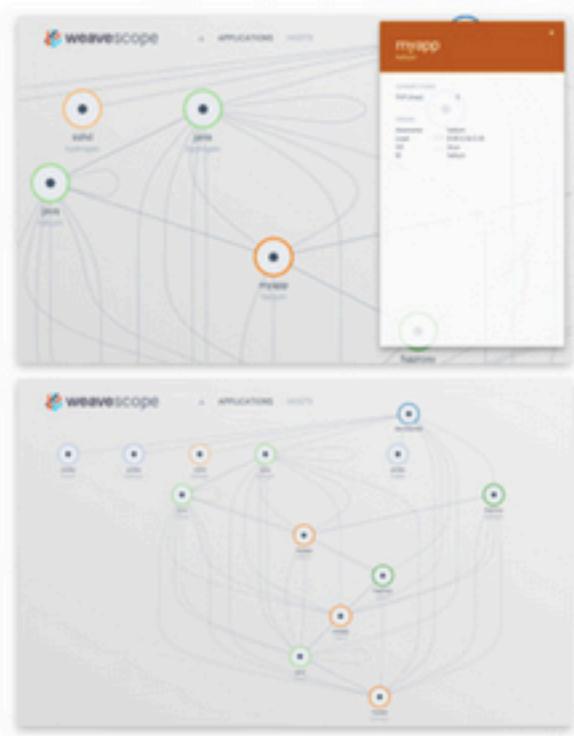
– Adrian Cockcroft, @adrianco

Weave Watchers on Github



Observe: Scope

- Scope automatically generates a map of your containers, enabling you to intuitively understand, monitor, and control your applications.
- weave.works/scope



Weave Scope - tns_app1_1

← → C https://husserl:4040/#/state/?topologyId="containers", "selectedNodeid": "8a4fd583fb57204270a0281e085cbdd894141e38d930beeb45a1cef50508d05a", "topologyOptions": {"system": "hide"} ⌂ ⌂ ⌂

weavescope

APPLICATIONS BY NAME CONTAINERS BY IMAGE HOSTS

tns_app1_1 chomsky

CONTAINER IMAGE "PETERBOURGON/TNS-APPLATEST"
Image ID 86ba1164dfff9b006ee759966816...

CONTAINER "TNS_APP1_1"
ID 8a4fd583fb57204270a0281e085cbdd894141e38d930beeb45a1cef50508d05a
Image ID 86ba1164dfff9b006ee759966816...
Ports 8080/tcp
Created 16 Sep 15 10:02 UTC
Command /app db1 db2 db3
IP Address 172.17.0.7
Memory Usage (MB): 0.00

PROCESS "APP" (12373)
Parent PID 7870
Command /app db1 db2 db3
Threads 5

HOST "CHOMSKY"
Load 1.14 1.03 1.36
Operating system linux
Kernel version 3.16.0-4-amd64 #1 SMP Debian ...
Uptime 5h19m44s

CONNECTIONS
TCP connections 2
Client 172.17.0.7:44189 172.17.0.4:9000
172.17.0.7:53452 172.17.0.5:9000
172.17.0.7:53883 172.17.0.3:9000
172.17.0.8:55081 172.17.0.7:8080
172.17.0.9:46321 172.17.0.7:8080

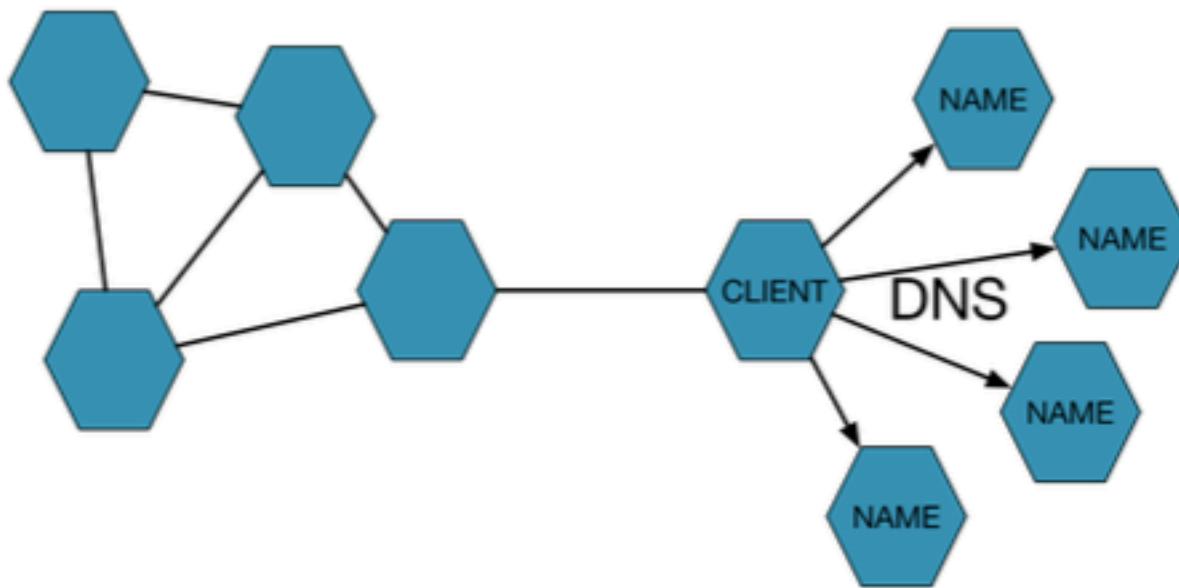
System containers hidden. **SHOW**

22 nodes, 26 connections

Version 94e825c Export an issue

Control: Run

Weave Run: IPAM, LB, SD (weaveDNS) ...



Use case – blue/green deployment, load management ...



Amazon Web Services

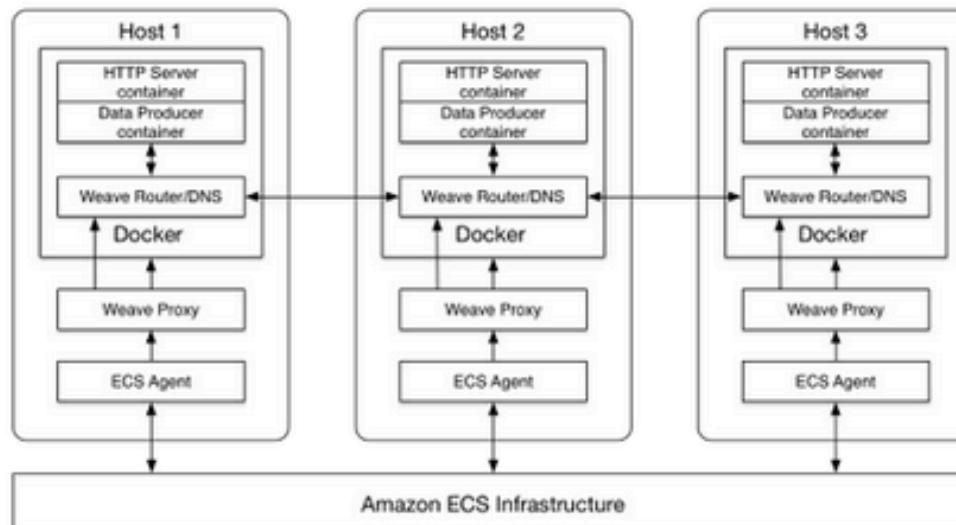
@awscloud



Follow

Find out how to do service directory & load balancing with @weaveworks and Amazon ECS: oak.ctx.ly/r/3ni1f

<http://oak.ctx.ly/r/3ni1f>



RETWEETS
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FAVORITES
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3:23 PM - 4 Sep 2015

Simple. Portable. Transparent.

- The most productive way for developers to connect, observe and control Docker containers
- Automatically works with every application
- No extra code
- Simple, scalable, fast



<http://weave.works>