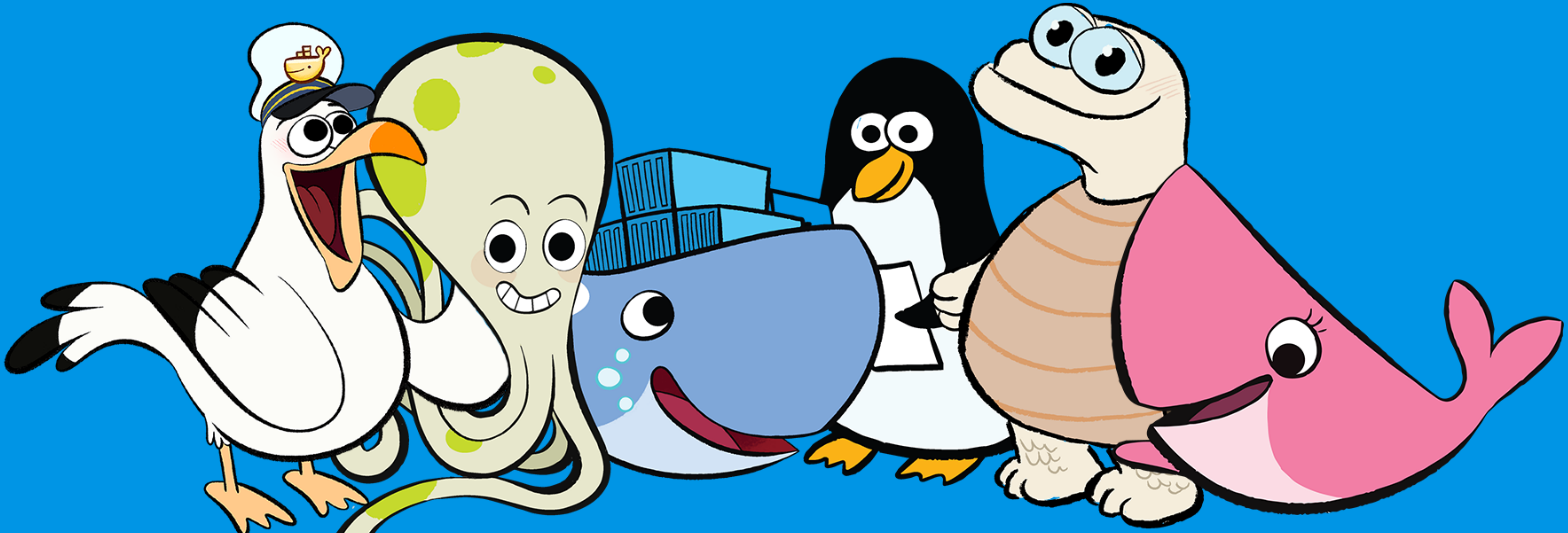
# How Docker is Changing IT

## 5 YEARS CREATING AN INDUSTRY OF INNOVATION



This is it. Containers are the next once-in-a-decade shift in infrastructure and process that make or break you.

SAID BY ME. JUST NOW.

# Let's Recap

MAJOR INFRASTRUCTURE SHIFTS

## Mainframe to PC

90'S

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## Baremetal to Virtual

00'S

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## Datacenter to Cloud

10'S

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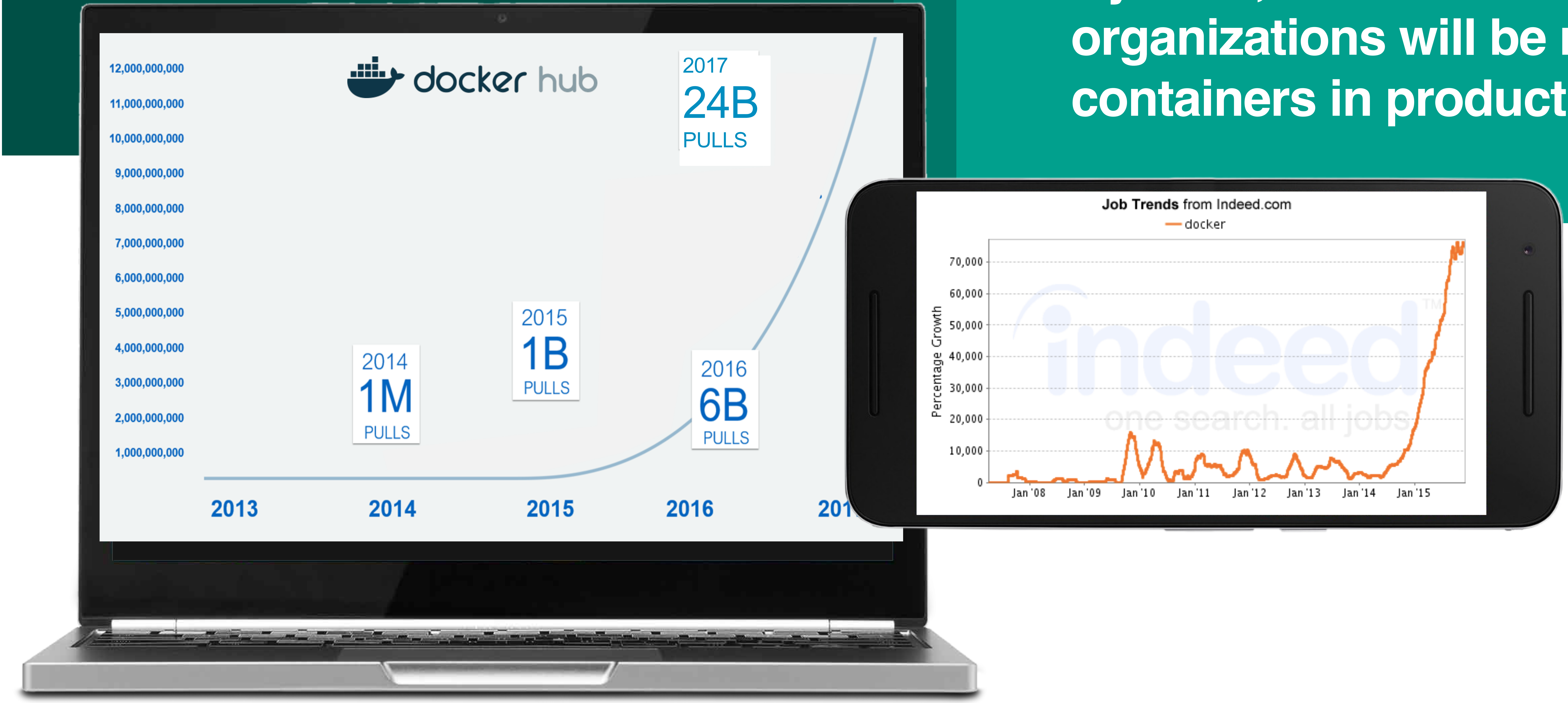
## Host to Container (Serverless)

Like all keepsakes, Docker is hard to part.

[illegible] shifts, [illegible] this focused on the migration experience.

# Containers are the “Fastest Growing Cloud Enabling Technology”

> “By 2020, more than 50% of global organizations will be running containers in production.”
>
> -Gartner



Title source: 451 Research

@docker

@gordonTheTurtle

# What will Docker do for me?

# Docker is all about speed.

Develop Faster.

Build Faster.

Test Faster.

Deploy Faster.

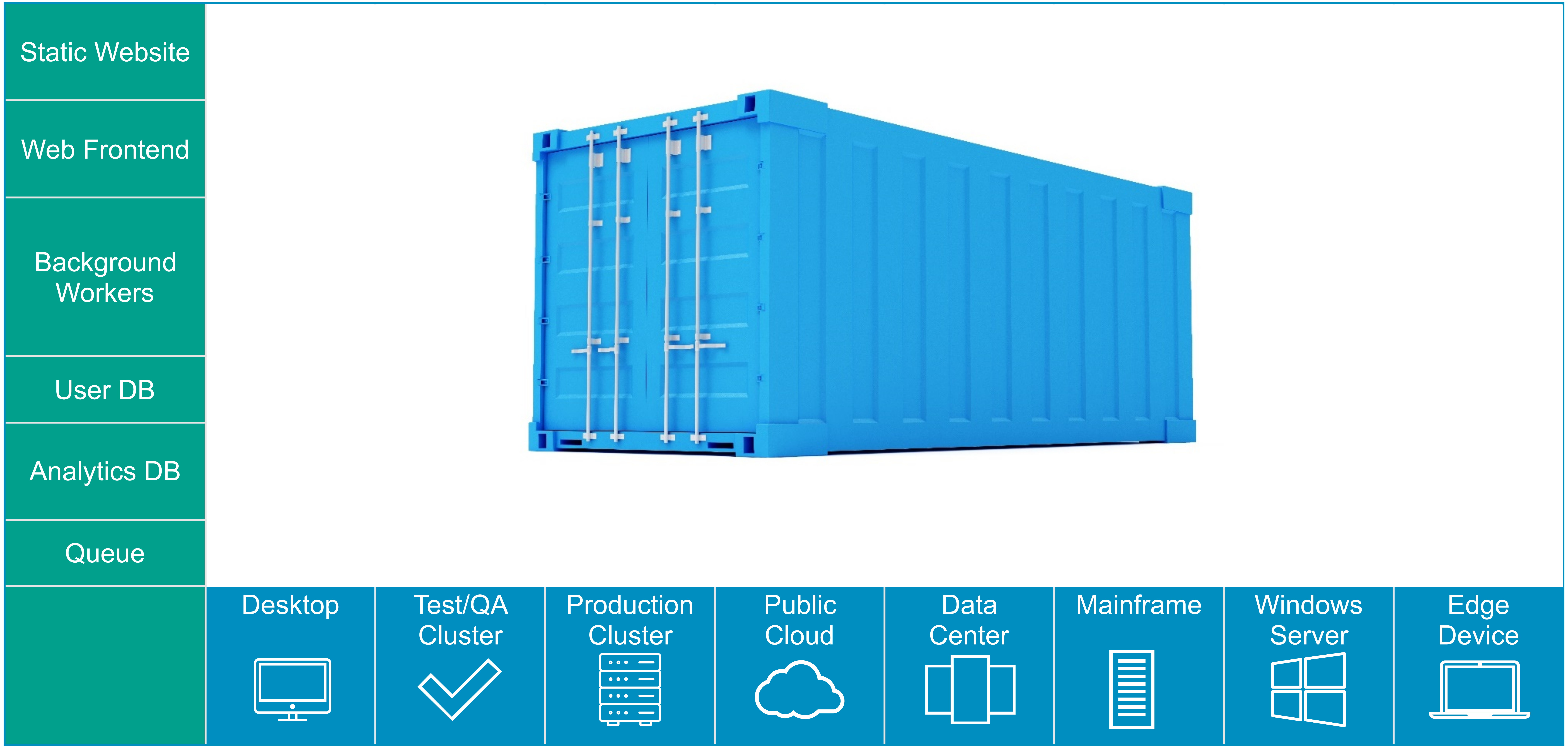
Update Faster.

Recover Faster.

# The “Matrix from Hell” Breeds Complexity

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Static Website | ? | ? | ? | ? | ? | ? | ? | ? |
| Web Frontend | ? | ? | ? | ? | ? | ? | ? | ? |
| Background Workers | ? | ? | ? | ? | ? | ? | ? | ? |
| User DB | ? | ? | ? | ? | ? | ? | ? | ? |
| Analytics DB | ? | ? | ? | ? | ? | ? | ? | ? |
| Queue | ? | ? | ? | ? | ? | ? | ? | ? |
| | Desktop | Test/QA Cluster | Production Cluster | Public Cloud | Data Center | Mainframe | Windows Server | Edge Device |

# Containers Reduce Complexity



Static Website

Web Frontend

Background Workers

User DB

Analytics DB

Queue

Desktop

Test/QA Cluster

Production Cluster

Public Cloud

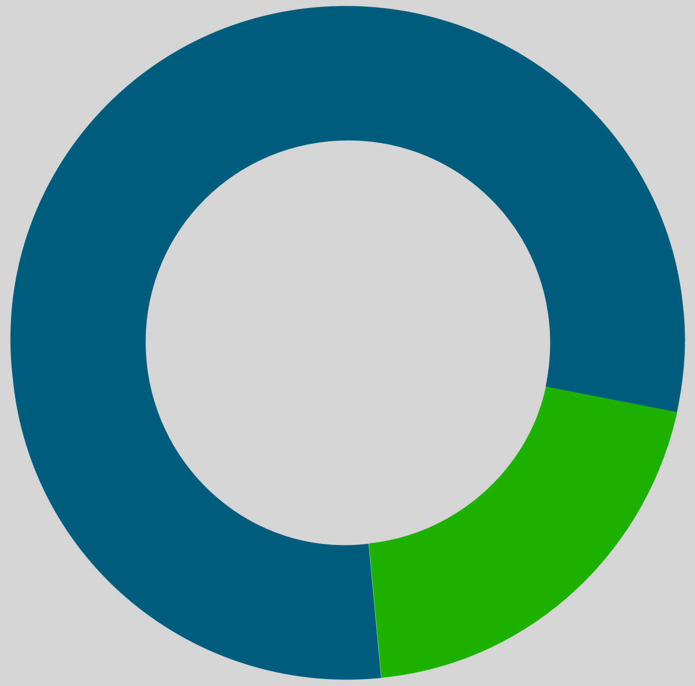
Data Center

Mainframe

Windows Server

Edge Device

# Maintenance and Complexity Drains Budgets, So Innovation Suffers



**80%**
MAINTENANCE

**20%**
INNOVATION

IT demands *increasing!*

<20% server utilization***

8+
IT Silos*

1000's
of apps

## Stalled Initiatives

- Modernizing legacy apps
- Cloud migration
- Server consolidation
- Faster s/w time to market

60% of CIOs say
***"We're behind in digital transformation"*****

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* Average number infrastructures in the enterprise (on-prem and cloud)
** Forrester, CIO and the emerging Digital Crisis, 2018
*** CloudPhysics, Global IT Data Lake Report, Q4, '16
Sources: IDC "The Cost of Retaining Aging IT Infrastructure", RightScale 2017 State of the Cloud Report

# 500+ Build Their Containerization Strategy with Docker Enterprise Edition

| Oil & Gas / Energy | Healthcare & Science | Financial Services | Tech | Insurance | Public Sector |
|---|---|---|---|---|---|
| | AMGEN® | Goldman Sachs | | Anthem. | GSA |
| HALLIBURTON | MERCK | SOCIETE GENERALE | RSA | Alm Brand | kadaster |
| Schlumberger | gsk GlaxoSmithKline | VISA | PayPal | Liberty Mutual. INSURANCE | CORNELL UNIVERSITY FOUNDED A.D. 1865 |
| eog resources | HudsonAlpha INSTITUTE FOR BIOTECHNOLOGY | ADP® | splunk> | MetLife | INDIANA UNIVERSITY |

docker.com/customers

## PayPal

18 Month project
Migrated 700+ apps
Now 150,000 containers
50% dev productivity boost

## MetLife

70% reduction in VM costs
67% fewer CPU's
10x average CPU utilization
66% cost reduction

https://blog.docker.com/2017/10/metlife-docker-enterprise-edition-self-funded-containerization/

https://blog.docker.com/2017/12/containers-at-paypal/

5
L.
docker

Docker Birthday #5
Iceland
Sweden
Russia
Canada
Kazakhstan
Mongolia
Ukraine
Italy
China
South Korea
North Atlantic Ocean
Afghanistan
Pakistan
India
Algeria
Libya
Egypt
Saudi Arabia
Thailand
Mali
Niger
Sudan
Chad
Nigeria
Ethiopia
Venezuela
Colombia
Kenya
DRC
Indonesia
Papua New Guinea
Tanzania
Peru
Brazil
Bolivia
Angola
Namibia
Botswana
Madagascar
Indian Ocean
South Atlantic Ocean
Australia
South Africa
Argentina
Google My Maps

HAPPY BIRTHDAY DOCKER!
docker
5
HAPPY BIRTHDAY
docker
Docker
I WALK THE LINE

# Cloud Native Landscape

v2.1

**See the interactive landscape at landscape.cncf.io**

Greyed logos are not open source

## App Definition & Development

### Database & Data Warehouse

Vitess
CNCF Incubating

### Streaming

NATS
CNCF Incubating

### Source Code Management

### Application Definition

### Continuous Integration / Continuous Delivery (CI/CD)

## Orchestration & Management

### Scheduling & Orchestration

kubernetes
CNCF Graduated

### Coordination & Service Discovery

CoreDNS
CNCF Incubating

### Service Management

GRPC
CNCF Incubating

envoy
CNCF Incubating

LINKERD
CNCF Sandbox

## Runtime

### Cloud-Native Storage

ROOK
CNCF Sandbox

### Container Runtime

containerd
CNCF Incubating

rkt
CNCF Incubating

### Cloud-Native Network

CNI
CNCF Incubating

## Provisioning

### Host Management / Tooling

### Infrastructure Automation

### Container Registries

### Secure Images

Notary
CNCF Incubating

TUF
CNCF Incubating

### Key Management

## Cloud

### Public

### Private

## Platforms

### Certified Kubernetes - Distribution

### Certified Kubernetes - Platform

### Non-Certified Kubernetes

### PaaS/Container Service

## Observability & Analysis

### Monitoring

Prometheus
CNCF Incubating

### Logging

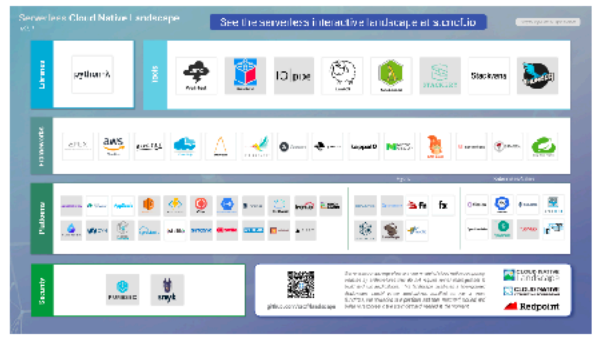
fluentd
CNCF Incubating

### Tracing

OPENTRACING
CNCF Incubating

JAEGER
CNCF Incubating

### Serverless



See the separate serverless landscape

## Kubernetes Certified Service Provider

### Special

github.com/cncf/landscape

*This landscape is intended as a map through the previously uncharted terrain of cloud native technologies. There are many routes to deploying a cloud native application, with CNCF Projects representing a particularly well-traveled path.*

CLOUD NATIVE Landscape

CLOUD NATIVE COMPUTING FOUNDATION

Redpoint

Amplify PARTNERS