

 @SEGALDORON

 DORON2402/DOCKER-NODEJS-REDIS

MICRO EVERYTHING

DOCKER, NODE.JS, REDIS

**A LITTLE BIT OF
HISTORY...**

**YOU NEED....
PHP 3, MYSQL,
IPTABLES, ETC..**



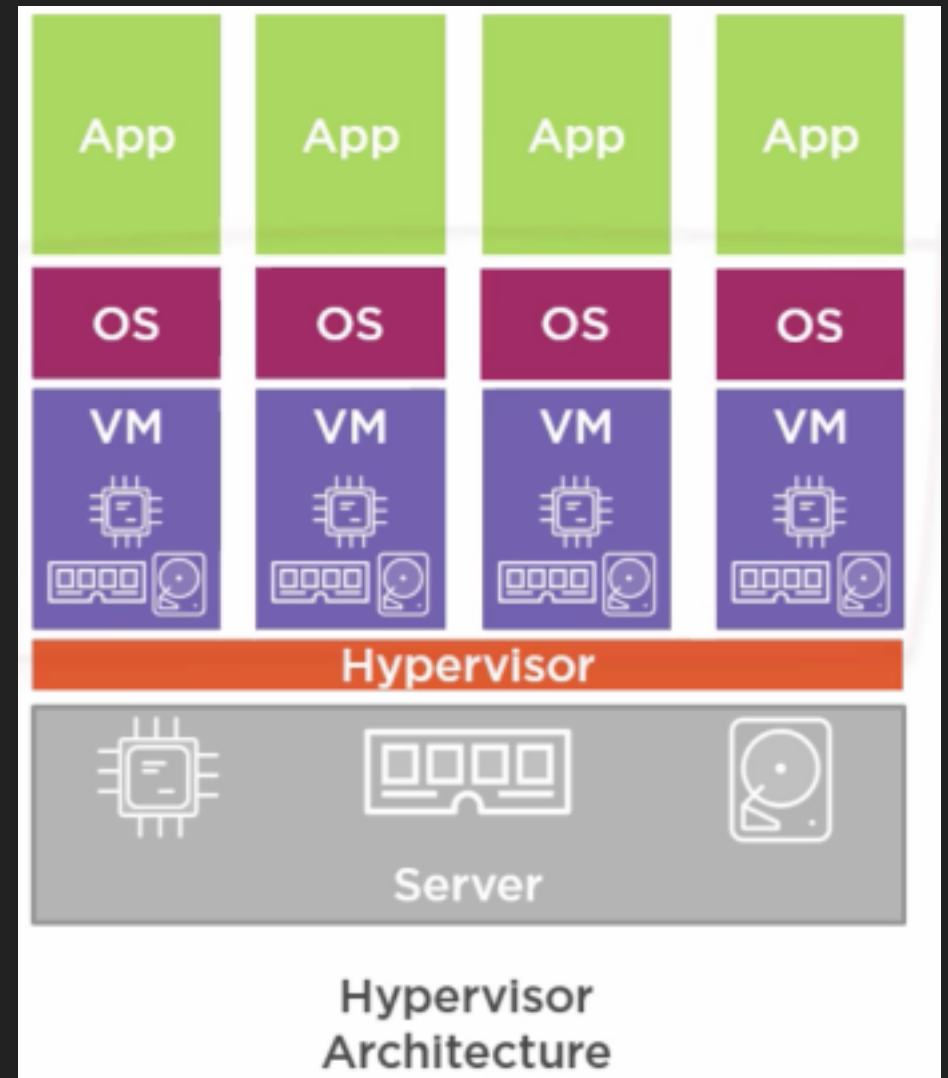
And your web server is ready!

AND THEN...

THE HYPERVISOR

MID 2000

YOU CAN RUN VIRTUAL SERVER



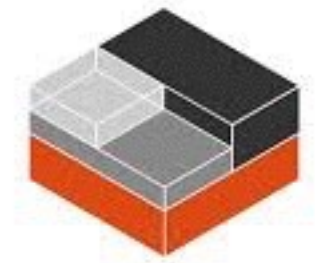
AND THEN...



LXD

The Linux container hypervisor

Fast, dense and secure container management for Ubuntu



CONTAINERS!!!



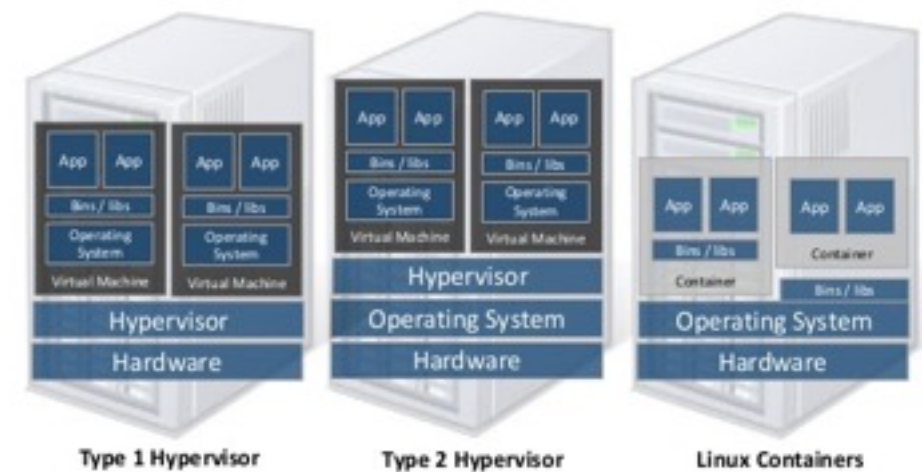
HOW DOCKER CHANGE THE WORLD

- ▶ Deployment
- ▶ Scaling
- ▶ Thinking in microsite
- ▶ Debugging
- ▶ Shipping
- ▶ Discovering

Hypervisors vs. Linux Containers

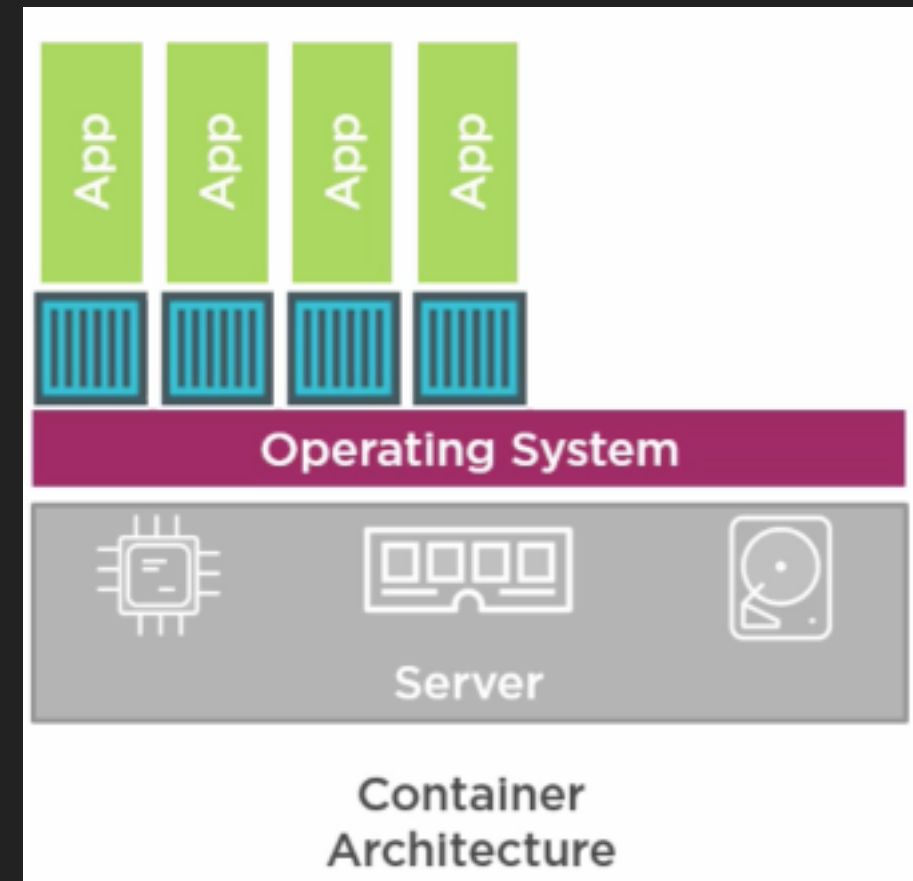
Containers share the OS kernel of the host and thus are lightweight. However, each container must have the same OS kernel.

Containers are isolated, but share OS and, where appropriate, libs / bins.

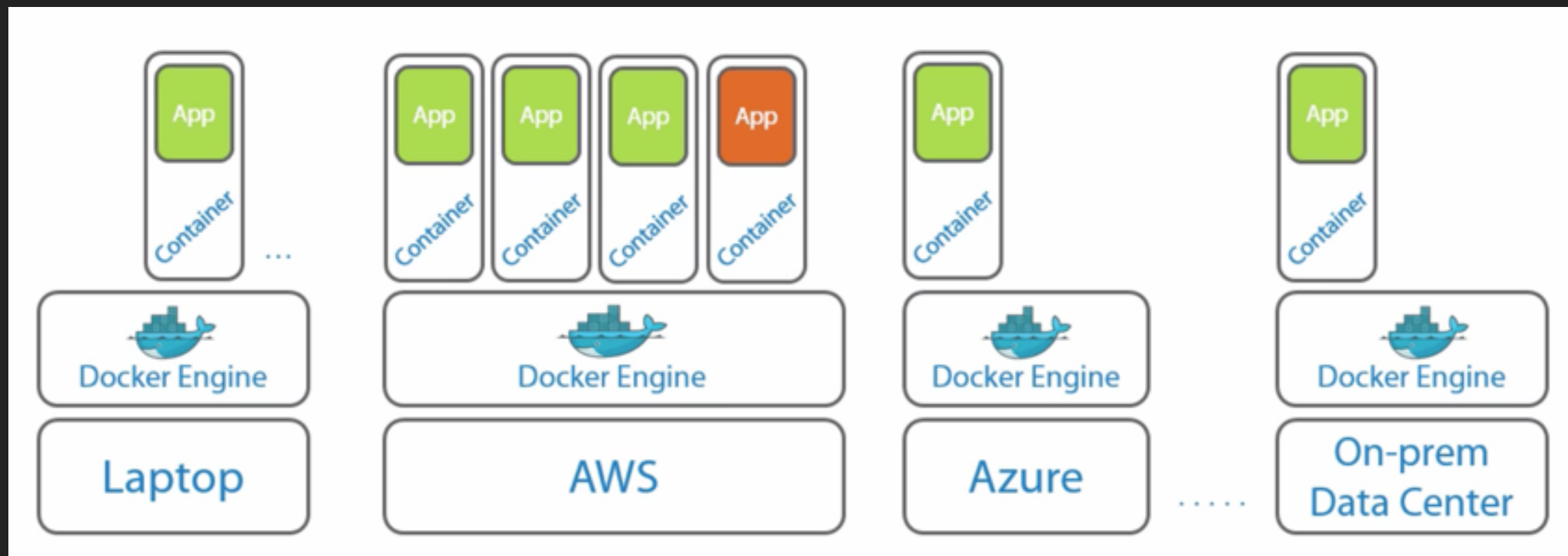


TODAY 2016

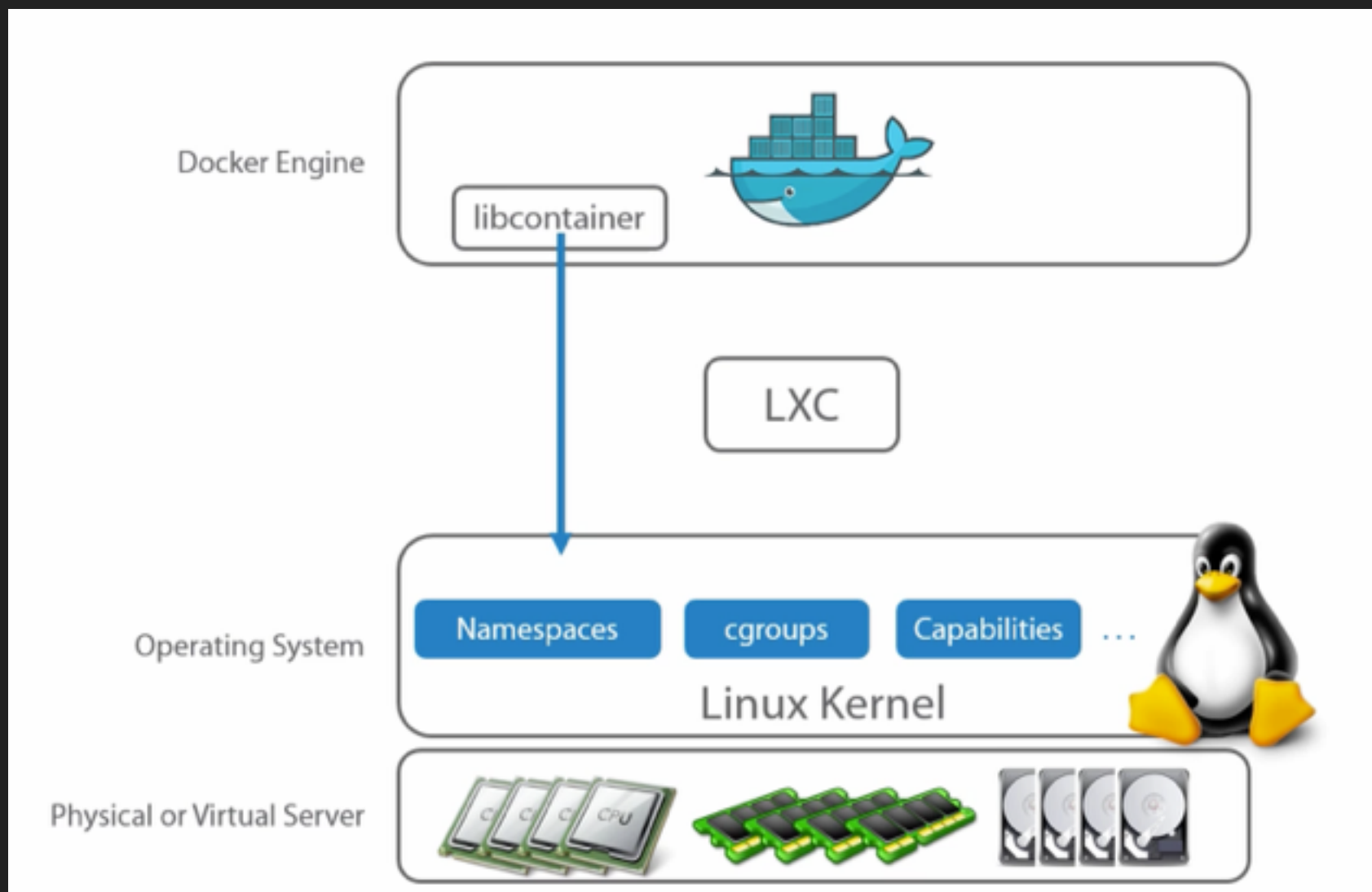
USING ONE OPERATION SYSTEM NO HYPERVISOR



A GAME CHANGER?



FUTURE/PRESENT RUNNING DOCKER MULTI PLATFORM....



MONOLITHIC APPLICATION

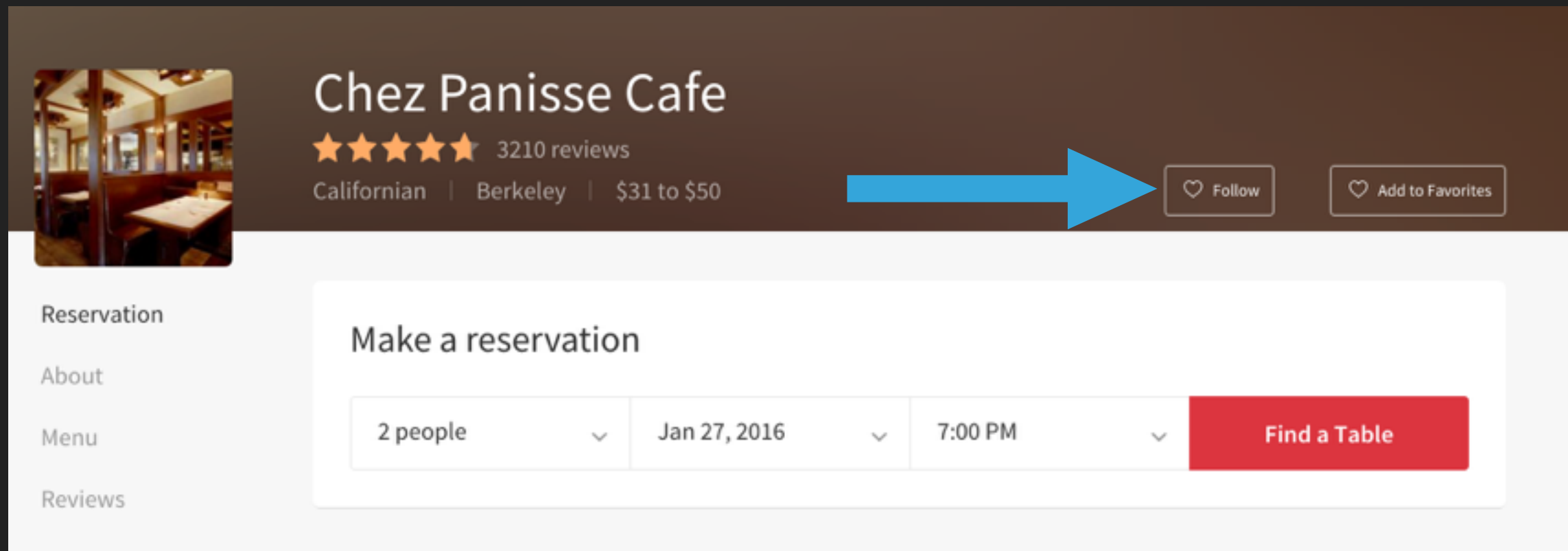
- ▶ Lots of engineers work on the same code base
- ▶ Scary deployment (all eggs in one basket)
- ▶ One thing doing too many things
- ▶ Hard to debug
- ▶ Scaling?!

MICRO SERVICE ARCHITECTURE

- ▶ Smaller code base
- ▶ Smaller team
- ▶ Fast & Small deployment
- ▶ Each service solve a specific problem
- ▶ Stateless
- ▶ Product VS Services
- ▶ Async Services

MONOLITHIC APPLICATION VS MICROSERVICES

EX' – LETS ADD FOLLOW BUTTON TO A RESTAURANT PAGE



The screenshot shows a restaurant profile for 'Chez Panisse Cafe'. The header section has a brown background and contains a restaurant photo, the name 'Chez Panisse Cafe', a 5-star rating with '3210 reviews', and location/cuisine details: 'Californian | Berkeley | \$31 to \$50'. To the right of this header are two buttons: 'Follow' and 'Add to Favorites'. A large blue arrow points from the restaurant details towards the 'Follow' button. On the left side of the page, there is a vertical menu with links: 'Reservation', 'About', 'Menu', and 'Reviews'. Below the header, a white box titled 'Make a reservation' contains a form with three dropdown menus: '2 people', 'Jan 27, 2016', and '7:00 PM', followed by a red 'Find a Table' button.

Chez Panisse Cafe
★★★★★ 3210 reviews
Californian | Berkeley | \$31 to \$50

[Follow](#) [Add to Favorites](#)

Reservation
About
Menu
Reviews

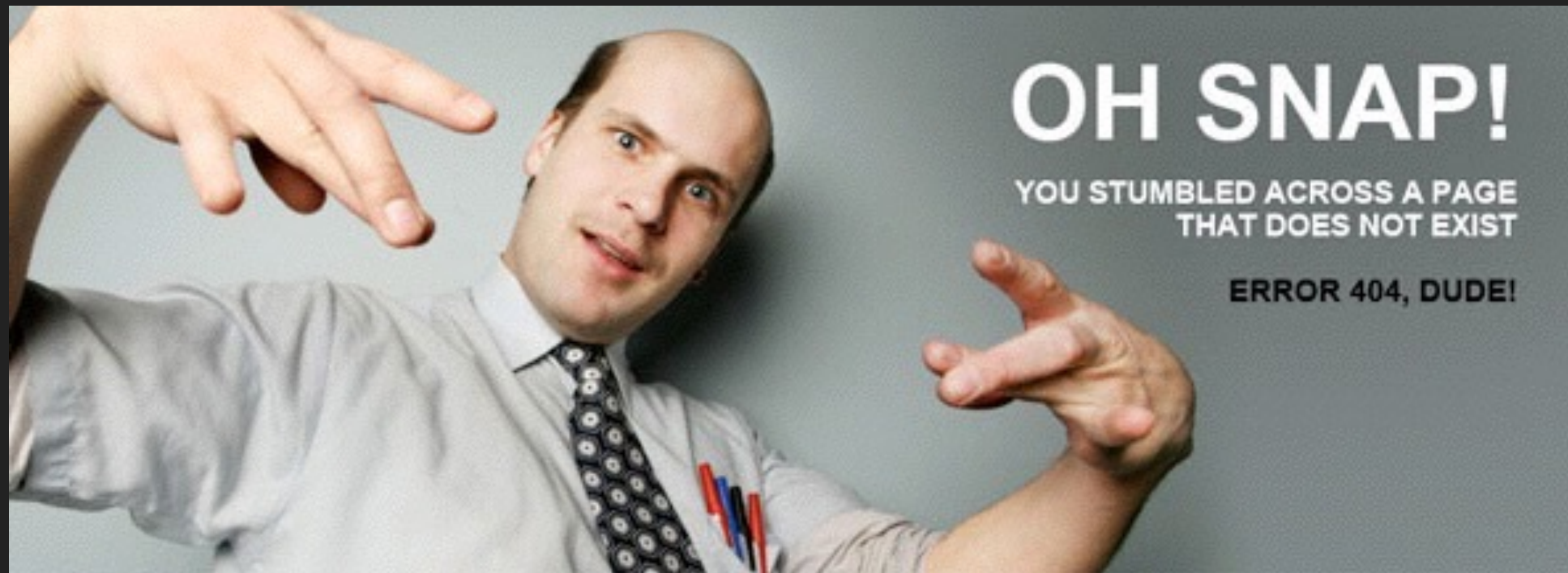
Make a reservation

2 people ▾ Jan 27, 2016 ▾ 7:00 PM ▾ [Find a Table](#)

EX' – LETS ADD FOLLOW BUTTON TO A RESTAURANT PAGE

- ▶ Monolithic App
 - ▶ Create new dir
 - ▶ Adding bunch of code
 - ▶ Add the routes
- ▶ Micro Service
 - ▶ Creating new service
 - ▶ Routing traffic to our service
 - ▶ [POST] /users/:id/follow/:id
 - ▶ [DELETE] /users/:id/follow/:id
 - ▶ [GET] /users/:id/follow/:id

OH NO WE HAVE A BUG?!?



MONOLITHIC APPLICATION

LETS TRY TO FIND THE BUG?!?



- ▶ Most importantly our site is DOWN!!

OUR SITE IS STILL UP



- ▶ Worse case scenario our `follow` button is missing or not saving the state after refresh

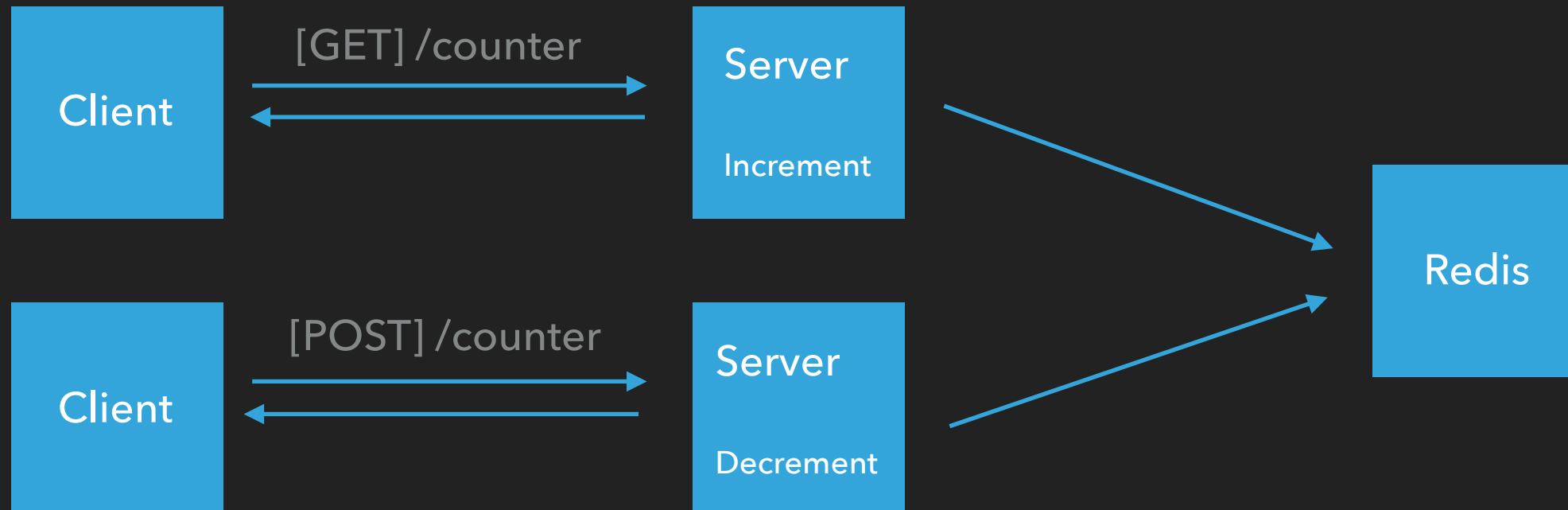
NOW THAT WE UNDERSTAND WHY MICRO SERVICE IS THE WAY TO GO LETS DEMO



OLD SITE COUNTER?



DEMO - COUNTER



In this example the communication is sync I would recommend using async

THANK YOU!

THE KEYS ARE

– ISOLATION

– IMMUTABILITY

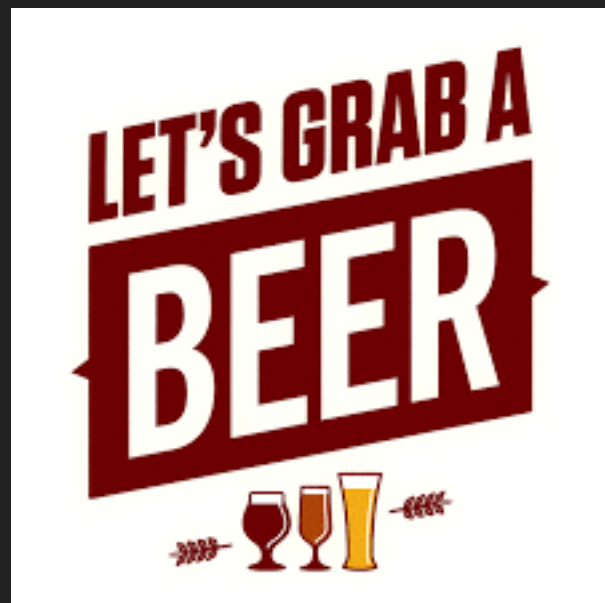
THANK YOU!

IF YOU CAN'T THINK ABOUT ANY QUESTION
PING ME LATER ON TWITTER @SEGALDORON

YOU CAN ALSO FIND THE CODE HERE:

[HTTPS://GITHUB.COM/DORON2402/DOCKER-NODEJS-REDIS](https://github.com/doron2402/docker-nodejs-redis)

SLIDESHOW AND LINKS WILL BE POST ON THE MEETUP PAGE



THANK YOU!