

# ArchSummit全球架构师峰会 北京站2015

## 容器时代的云计算

梁胜 Rancher Labs

# Geekbang >

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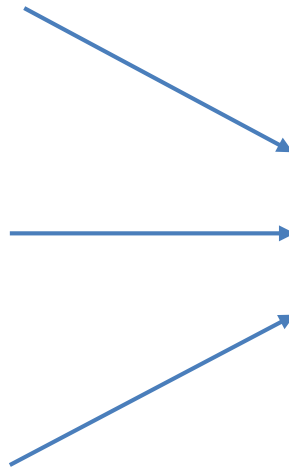
Growth of Devices  
and Apps



Growth of Big Data  
and Analytics



Growth of  
Internet of  
Things



Growth of Datacenters

## Data center industry in transition

Company	Last report date	Quarterly revenue	YoY growth
HP	Oct 31 2015	\$25.71B	-9.5%
NetApp	Nov 18 2015	\$1.45B	-6.4%
Cisco	Nov 12 2015	\$12.7	+4%
EMC	Oct 21 2015	\$6.08B	+1%
IBM	Sep 20 2015	\$19.29B	-14%

# Gartner IaaS Magic Quadrant



**2014**

AWS **5x** capacity  
of the nearest 14  
competitors  
combined

**2015**

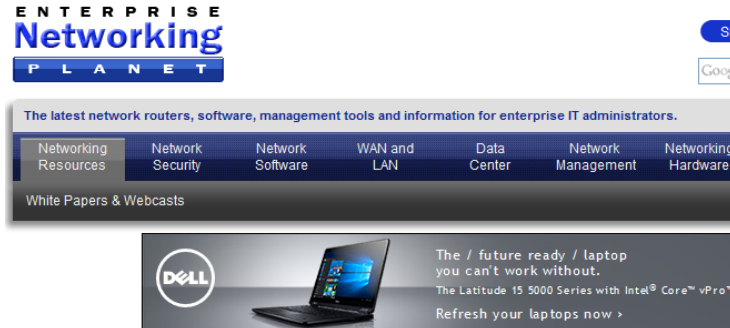
AWS **10x** capacity  
of the nearest 14  
competitors  
combined

Cloud IaaS is not a commodity.

Lydia Leong, Gartner



# What about private cloud?



## Bits or pieces

A node between the physical and digital.  
The rants and raves of Simon Wardley.  
Industry and technology mapper, business s  
*"I like ducks, they're fowl but not through ch*

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### Doubt Creeps Into OpenStack

Doubts about OpenStack put the focus on the open source cloud platform's weaknesses.

By [Arthur Cole](#) | Posted Nov 13, 2015  
Page of 1 | [Back to Page 1](#)



The OpenStack community recently wrapped up what can only be described as a successful summit in Tokyo, with over 400 attendees and members of the community.

Tuesday, July 16, 2013

### The trouble with OpenStack

Depending upon which analyst or flat earther you listen to, then OpenStack rules. I don't buy this for a second and instead take the view it's most likely to be a dead duck. Why?

Well, from its very beginning, when I put OpenStack on stage at OSCON Cloud Summit in 2010, I warned several of the executives behind the project on the dangers of Amazon's ecosystem. Being an Amazon clone and co-opting was priority number one in my view. Alas, they wanted to talk

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## The Guardian goes all-in on AWS public cloud after OpenStack 'disaster'

The Guardian is moving its entire IT estate to Amazon Web Services



Matthew Finnegan  
November 17, 2015

- While The Guardian has ditched the open source cloud platform, British Gas Connected Homes is setting up OpenStack cloud to hold sensitive data on-premise

- The Guardian has revealed that it is moving all its infrastructure to Amazon Web Services' public cloud, after a project to deploy the open source platform OpenStack in its own data centres was aborted.

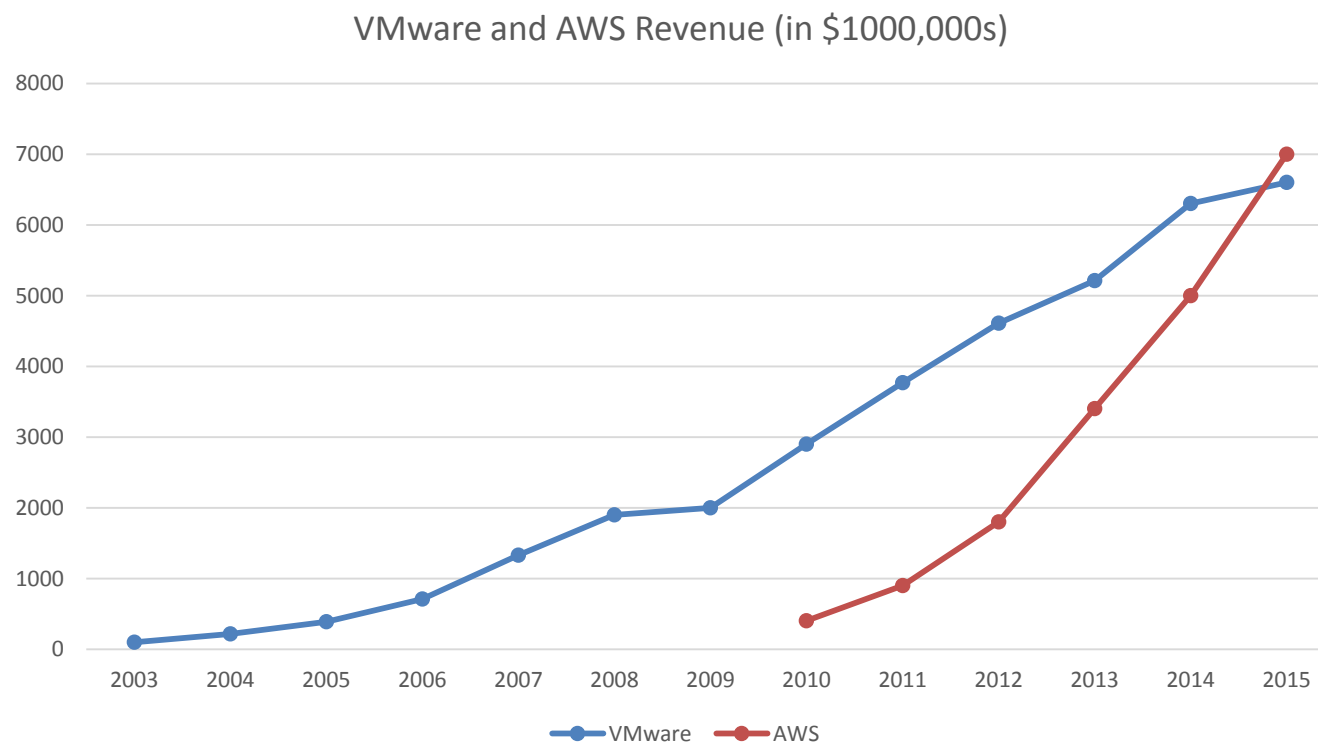
Why has OpenStack not succeeded?

The real problem: built it, but nobody came



Private Cloud == vSphere

## Where do we go from here?



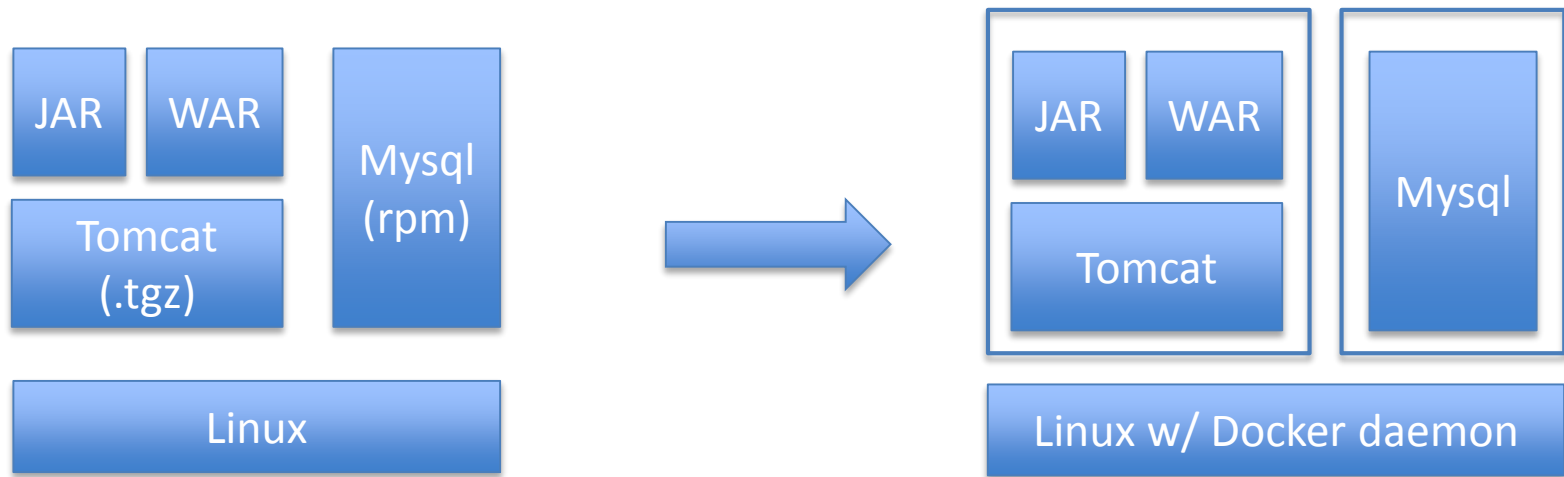
## Docker bursts onto the scene

	Dec 2013	Jun 2014	Dec 2014	Jun 2015	6 month growth
GitHub Projects	-	6,500	23k	100k	335%
DH Repos	3,500	14,500	70k	152k	117%
Downloads	240k	2750k	100M	535M	435%

source: Docker projects on GitHub.com

# What is Docker?

- Not a replacement for VM
- As an application packaging format, it is similar to JAR, rpm, etc.

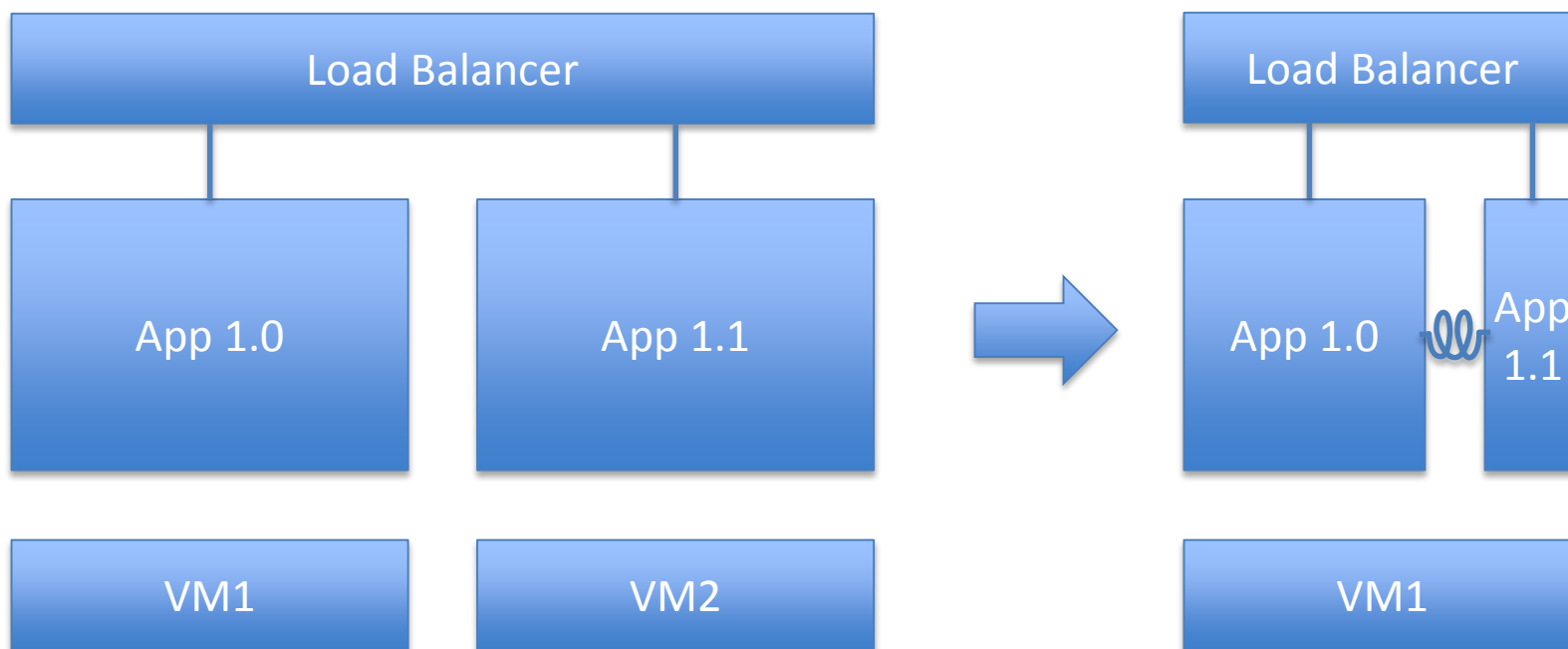


**You do not have to use microservices to run Docker**

Why do people use Docker?

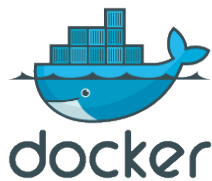


## One benefit: higher resource utilization



But more importantly: consistent developer experience

Fact: vast majority of Docker users run on AWS



Developer

Operations

# The new private cloud: private container service



Private Container Service

Linux

Linux

Linux

Linux

Linux

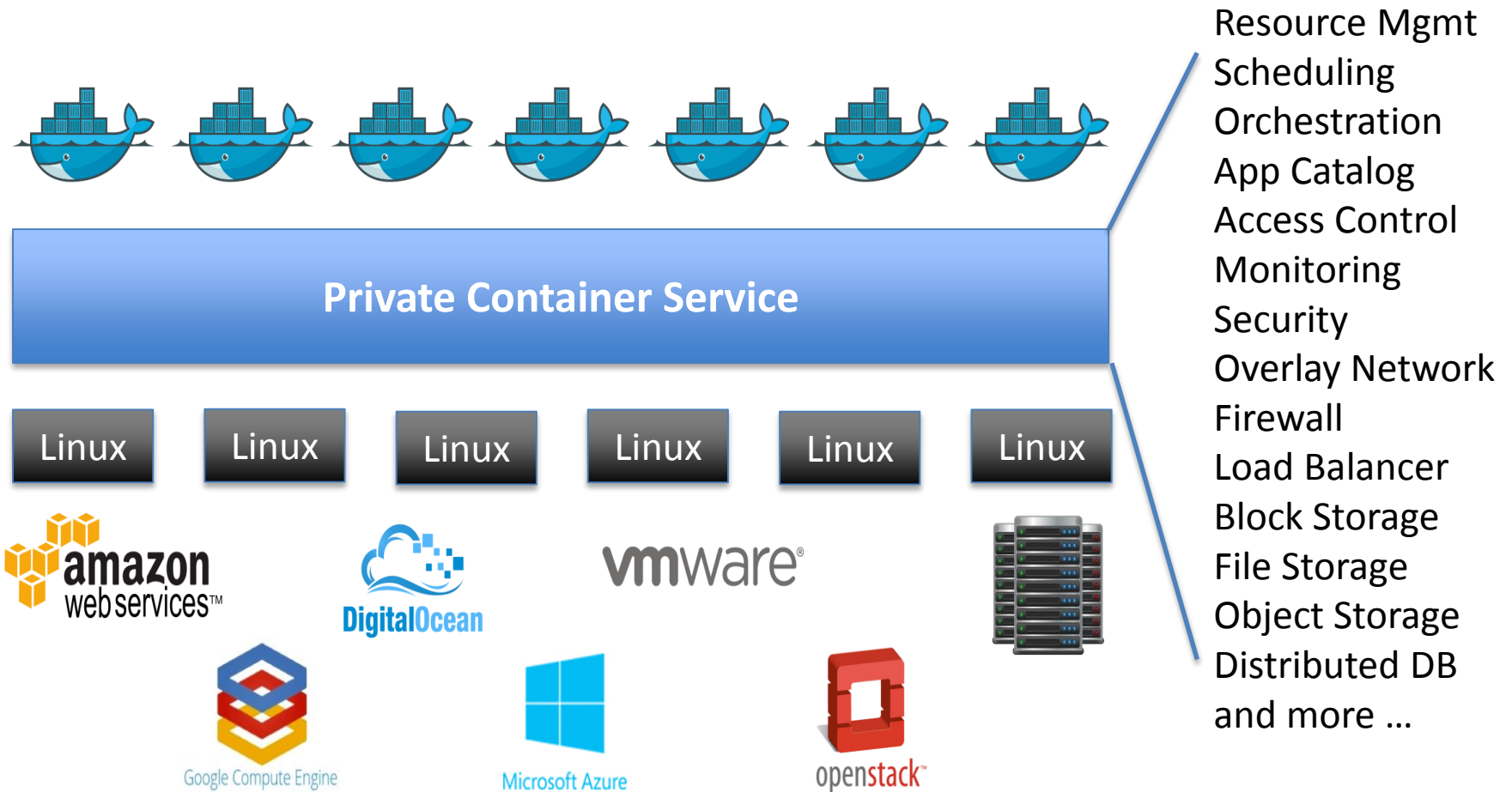
Linux



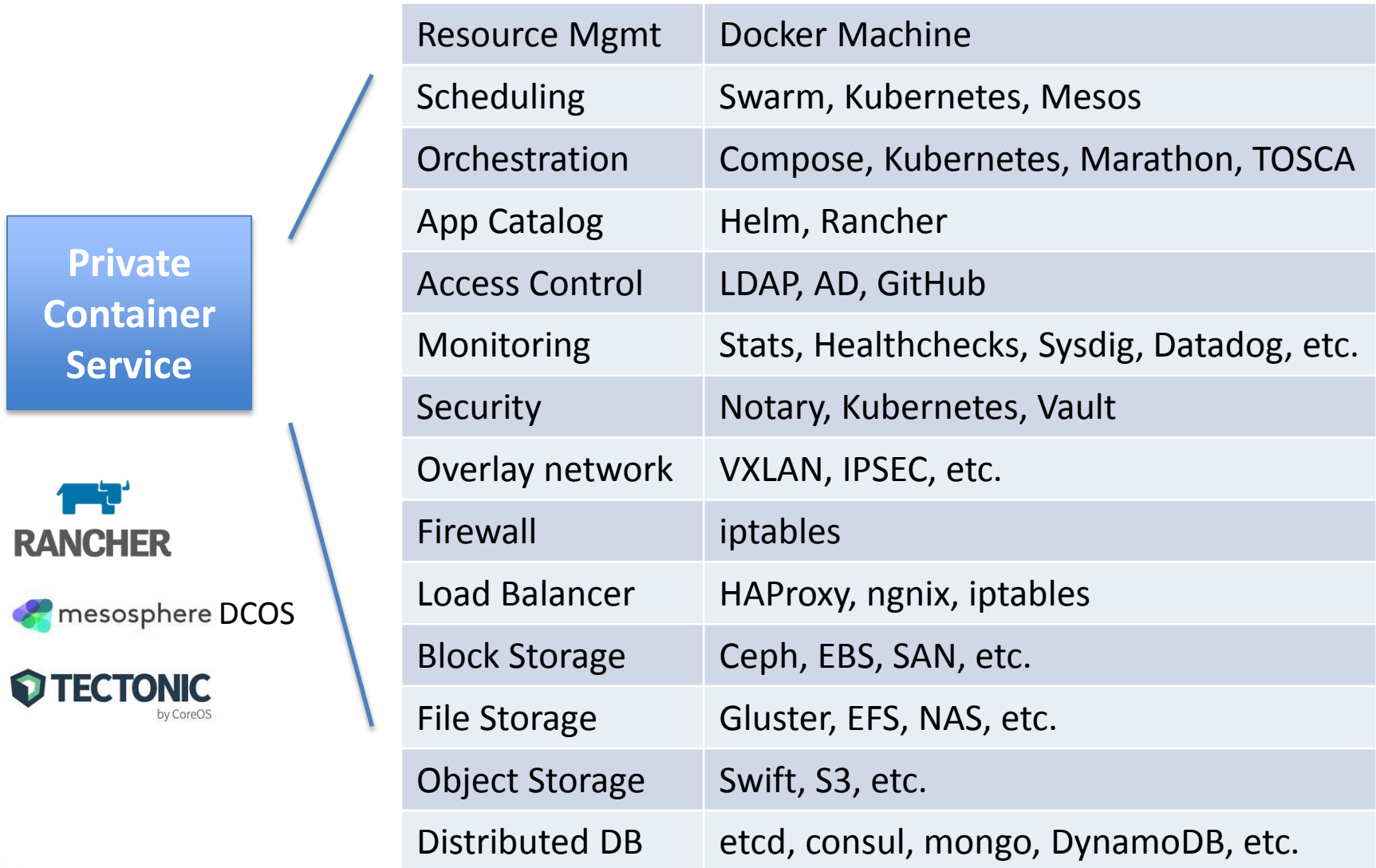
vmware®



# What is in a private container service

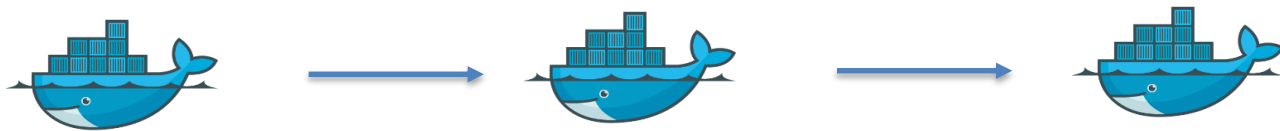


# What is in a private container service



# Implications of private container services

- Computing resources are a commodity
- Consistent DevOps environment from laptop to cloud



Private Container Service



Development



Test



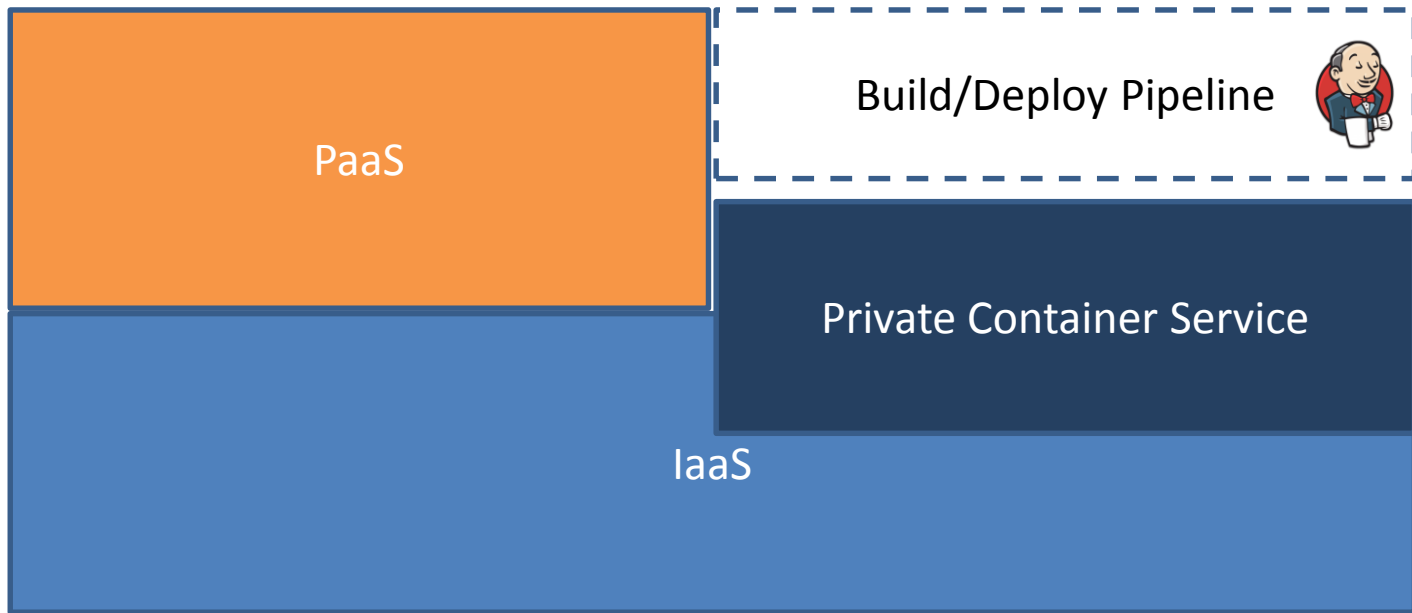
Production



## An analogy



## What about PaaS?



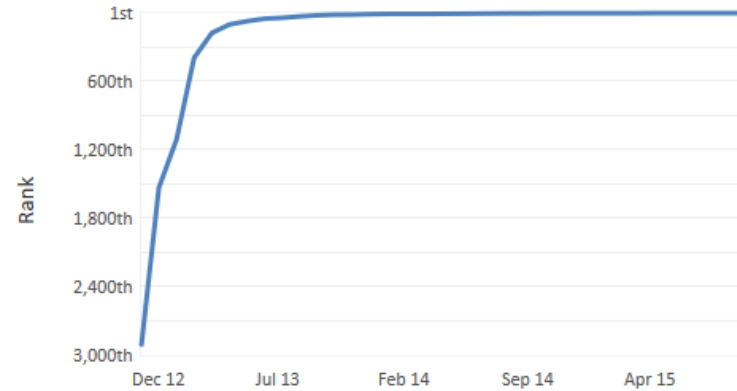
# Miraculous growth of DigitalOcean

DigitalOcean's Worldwide Growth



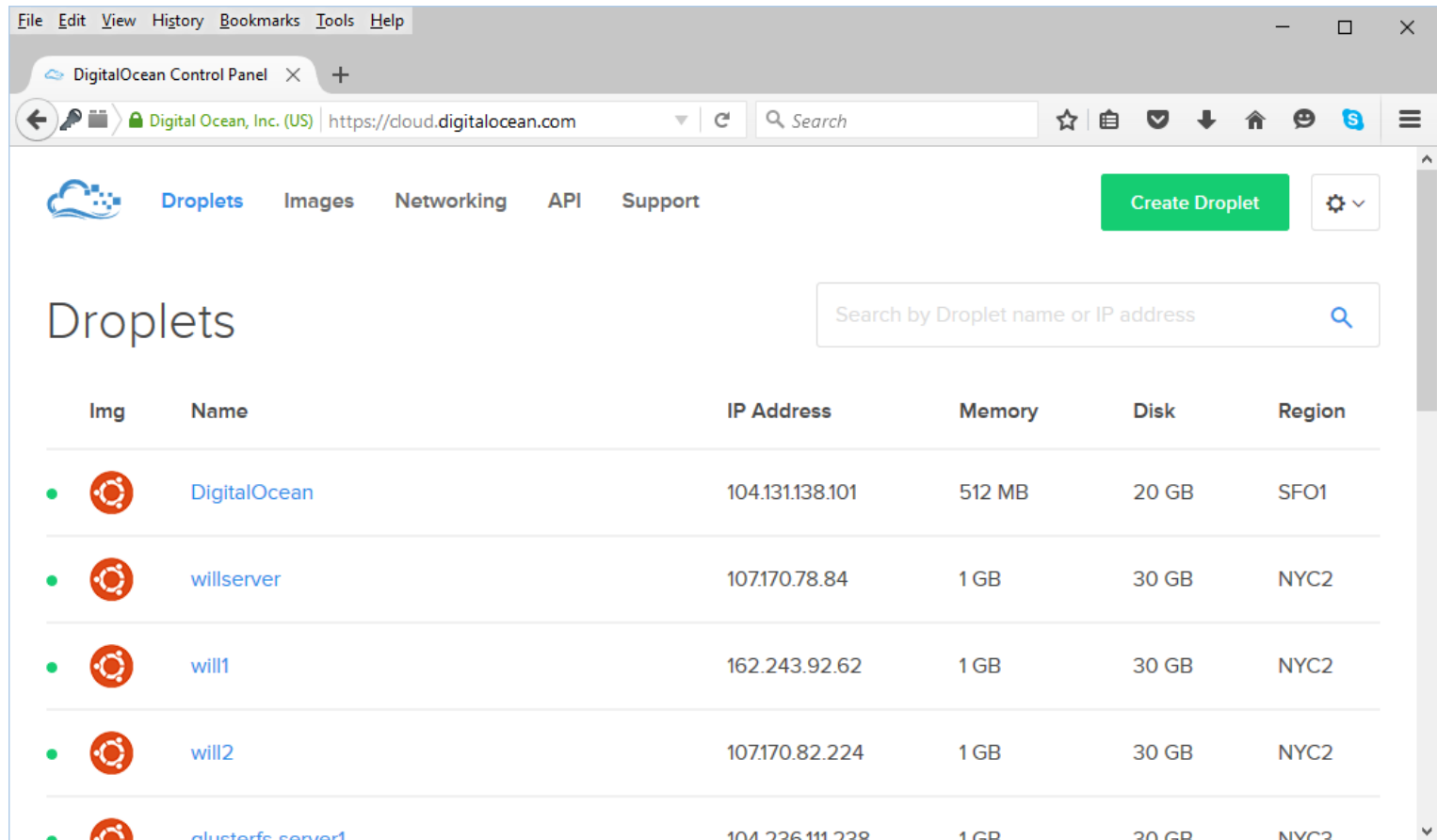
ΠETCRAFT

DigitalOcean's Worldwide Rank








ΠETCRAFT

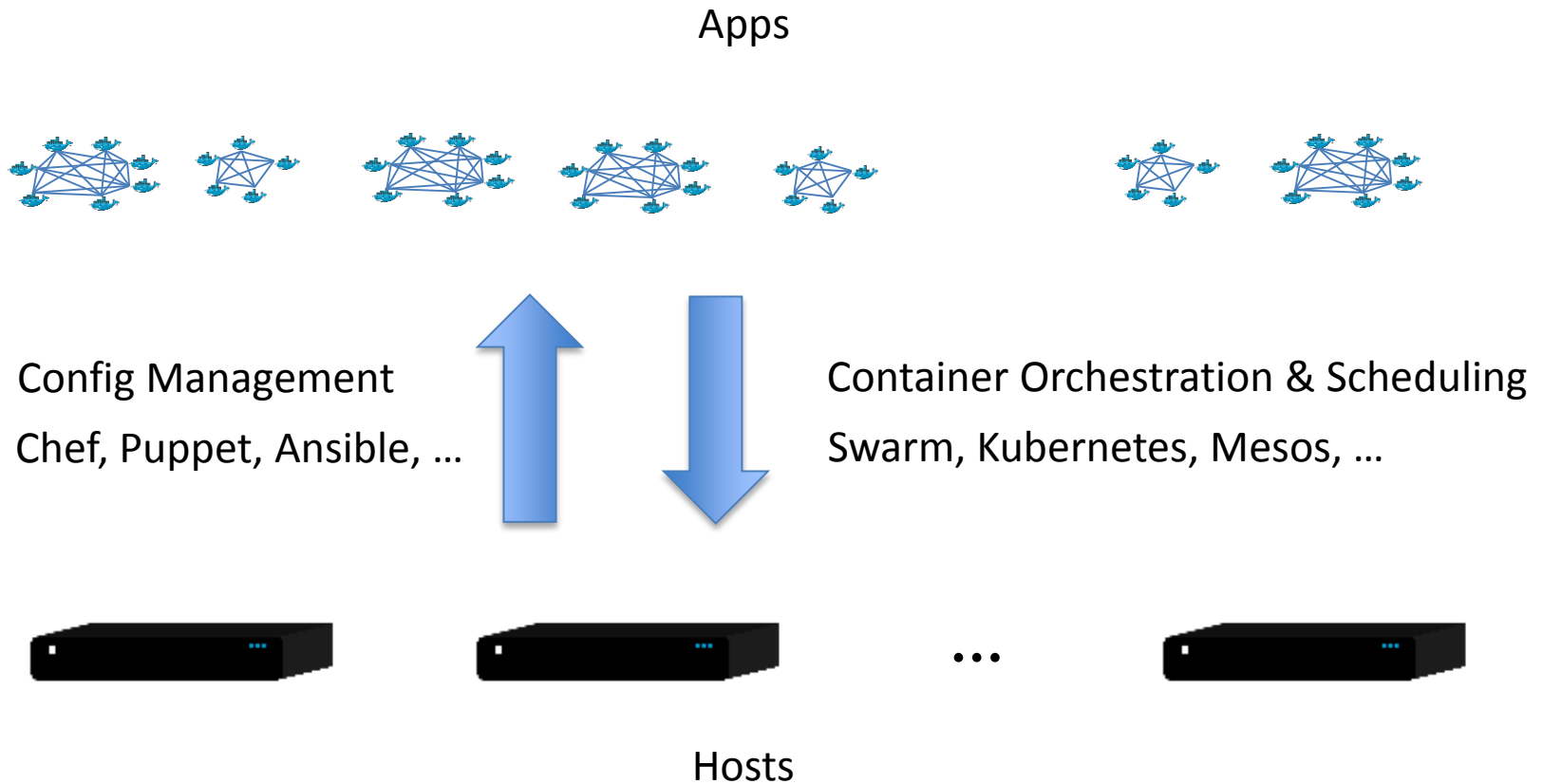
# Simplicity wins



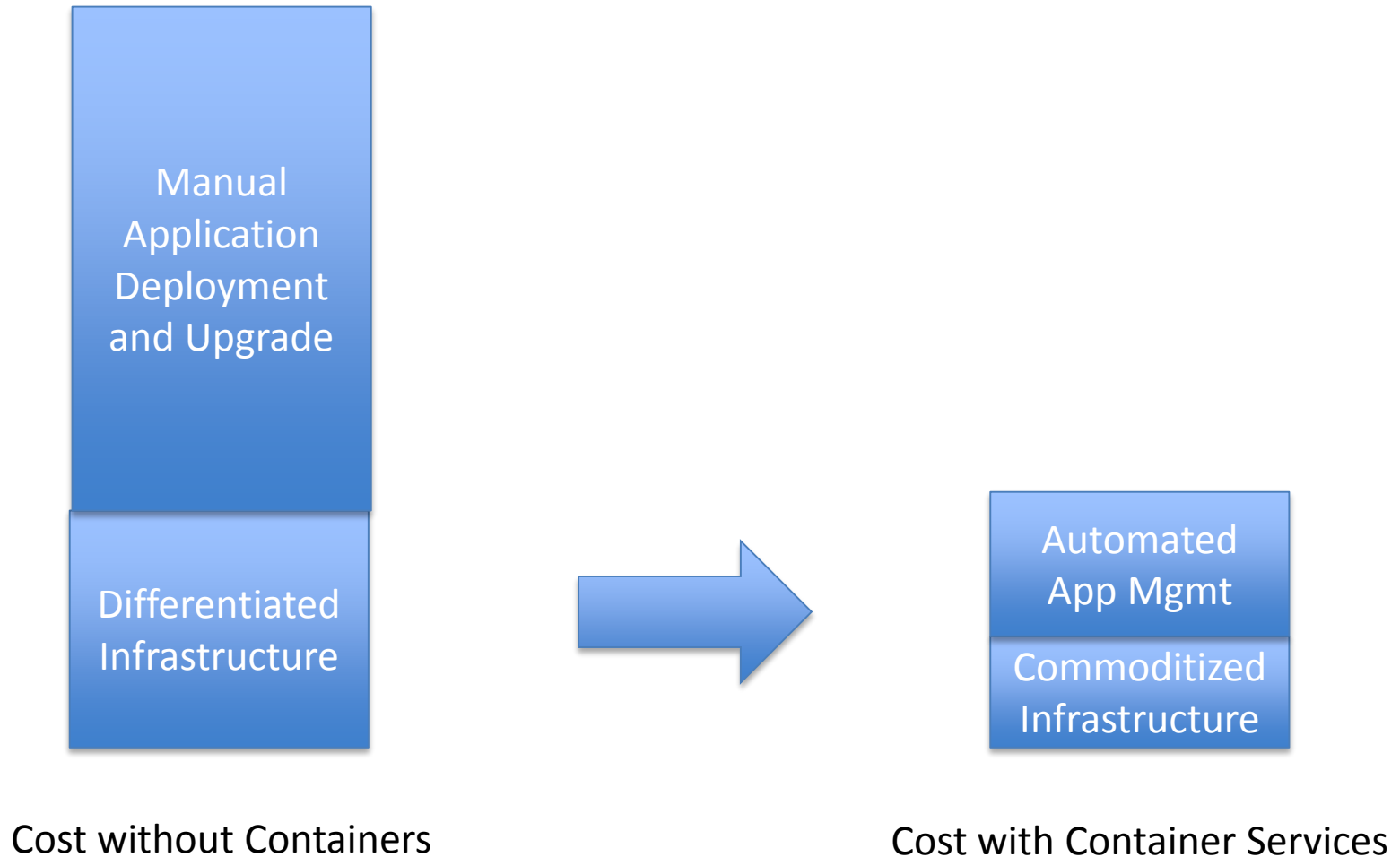
The screenshot shows the DigitalOcean Control Panel in a web browser. The browser's address bar displays "https://cloud.digitalocean.com". The page features a navigation bar with links for "Droplets", "Images", "Networking", "API", and "Support". A green "Create Droplet" button is located in the top right corner. Below the navigation bar, the "Droplets" section is titled, and a search bar is provided with the placeholder text "Search by Droplet name or IP address". A table lists the existing droplets, with columns for "Img", "Name", "IP Address", "Memory", "Disk", and "Region".

Img	Name	IP Address	Memory	Disk	Region
	DigitalOcean	104.131.138.101	512 MB	20 GB	SFO1
	willserver	107.170.78.84	1 GB	30 GB	NYC2
	will1	162.243.92.62	1 GB	30 GB	NYC2
	will2	107.170.82.224	1 GB	30 GB	NYC2
	clusterfs-server1	104.236.111.238	1 GB	30 GB	NYC3

# Two ways of automating application management at scale



## What container services give us



One Last Thing

# Container live migration is coming



Private Container Service



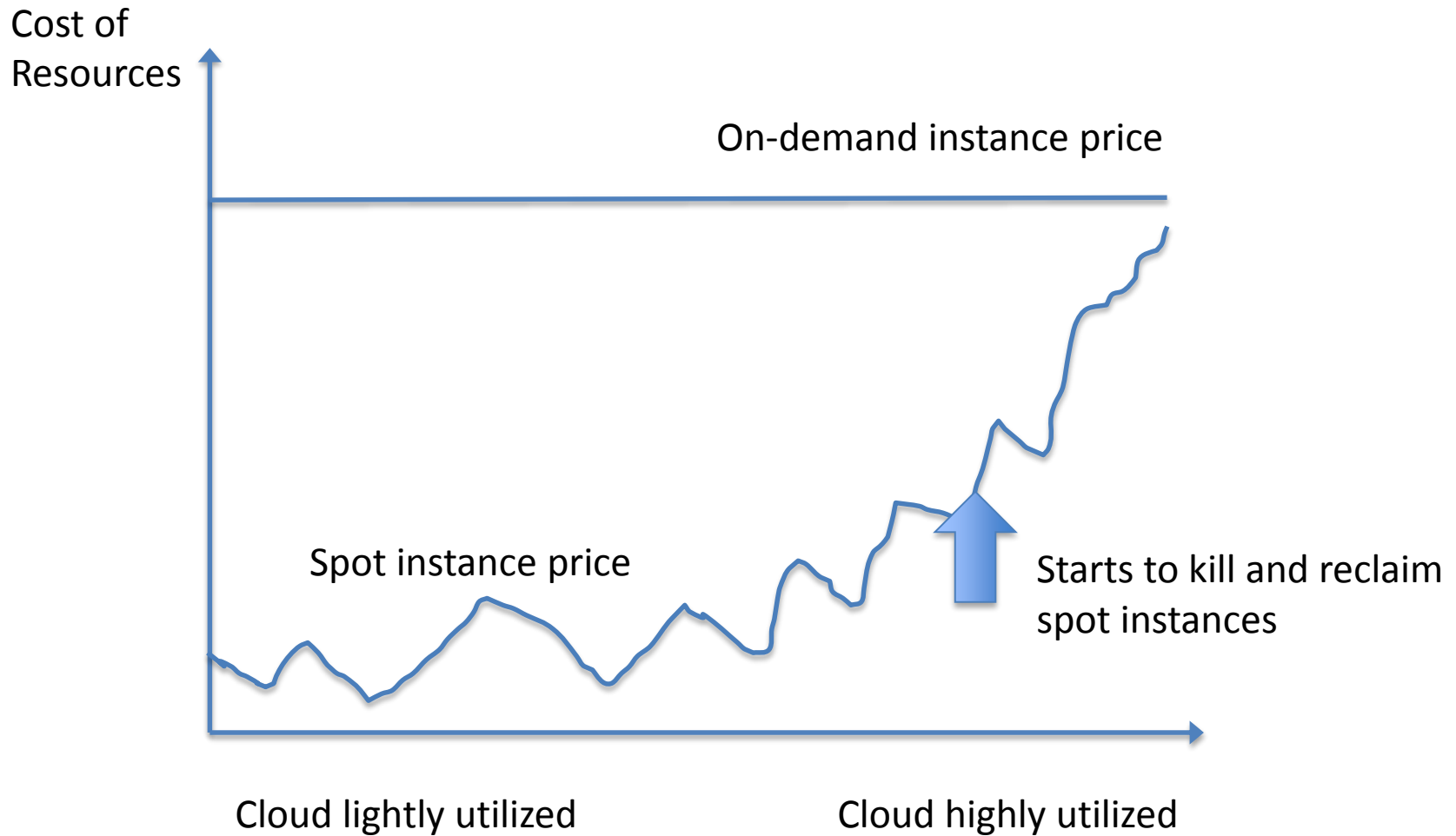
Data Center



Cloud

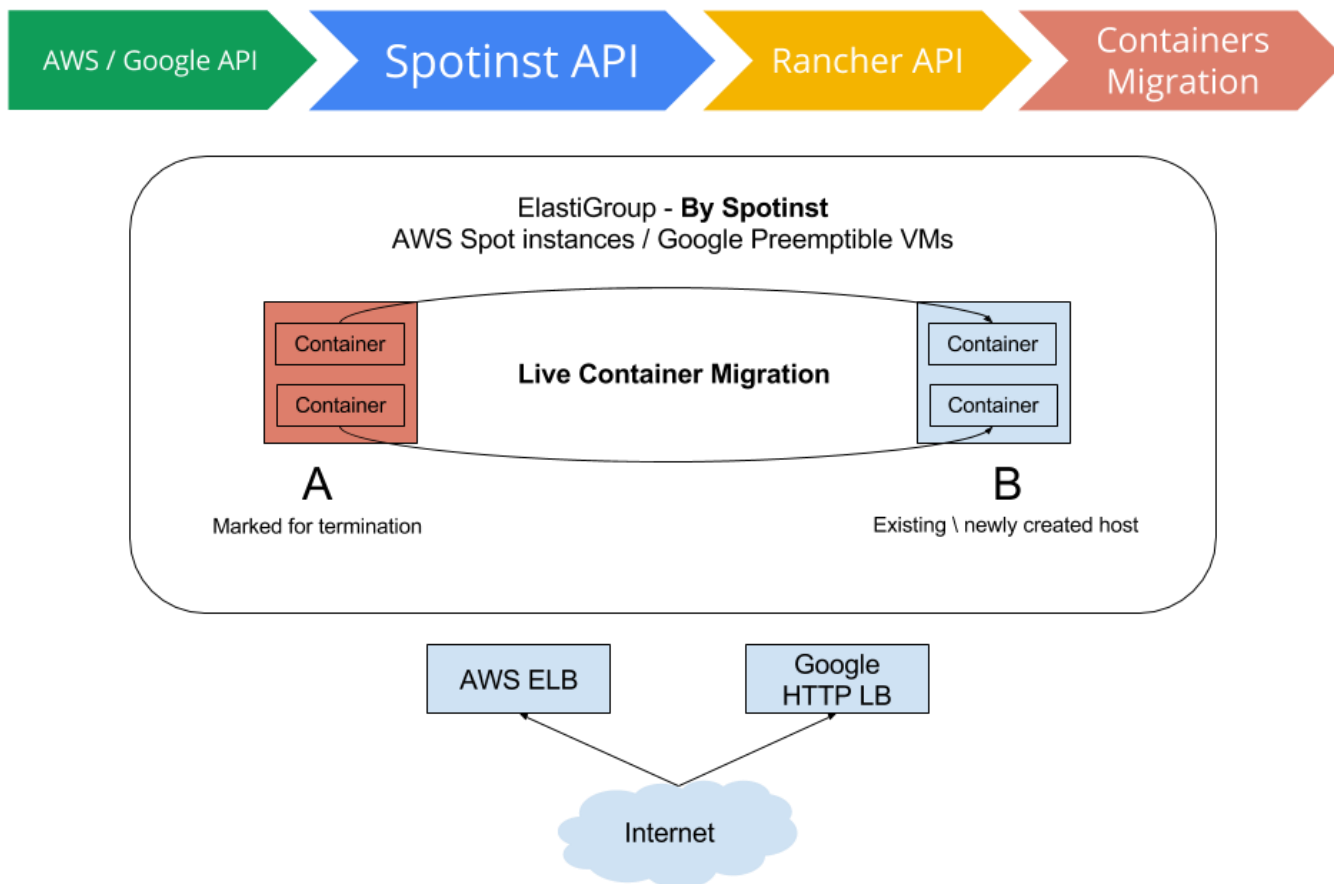


## AWS spot and on-demand instance



By monitoring spot instance price, we can know 5-10 minutes in advance that AWS will kill and reclaim spot instances

# Rancher and Spotinst work together can save your AWS and GCE bill by 70-90%



More info <http://sina.lt/eAAk>

Questions?

[sheng@rancher.com](mailto:sheng@rancher.com)

# Thanks!

