

ArchSummit全球架构师峰会 北京站2015

容器时代的云计算

梁胜 Rancher Labs

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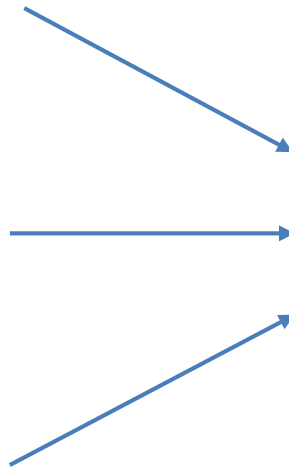
Growth of Devices
and Apps



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

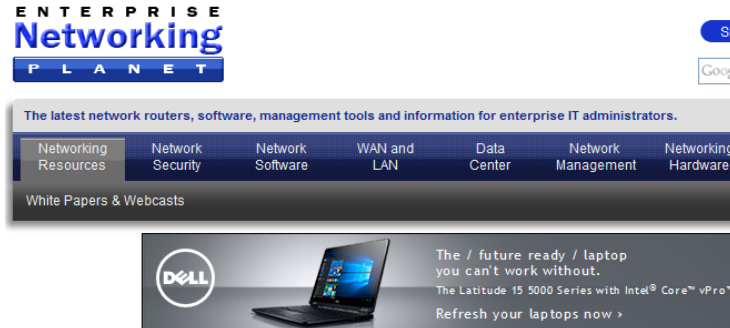
2015

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

[Home](#) → [Data Center](#) → [Data Center Blog](#)

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 developers and members of the community in attendance.

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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[Home](#) > [Features](#) > [Cloud Computing](#) > [The Guardian goes all-in on AWS public cloud after OpenStack 'disaster'](#)

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.

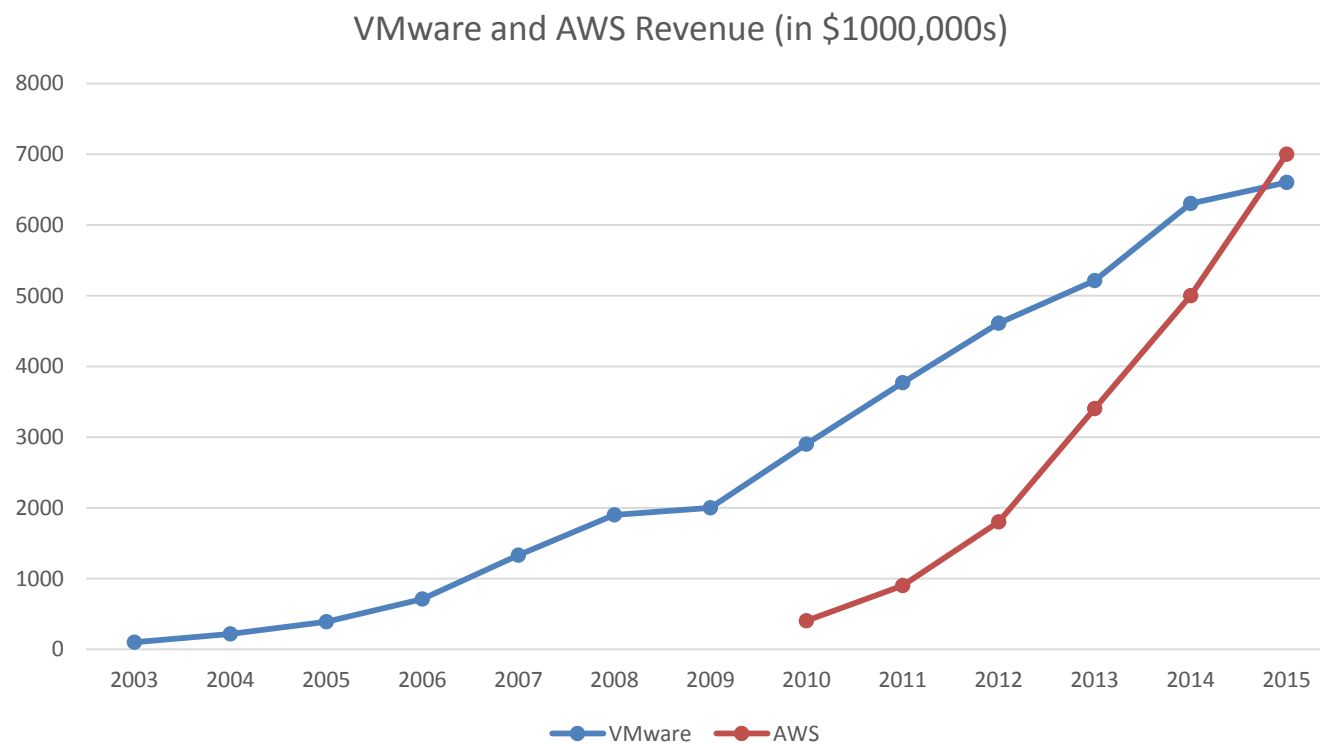
Why has OpenStack not succeeded?

The real problem: built it, but nobody came



Private Cloud == vSphere

Where do we go from here?



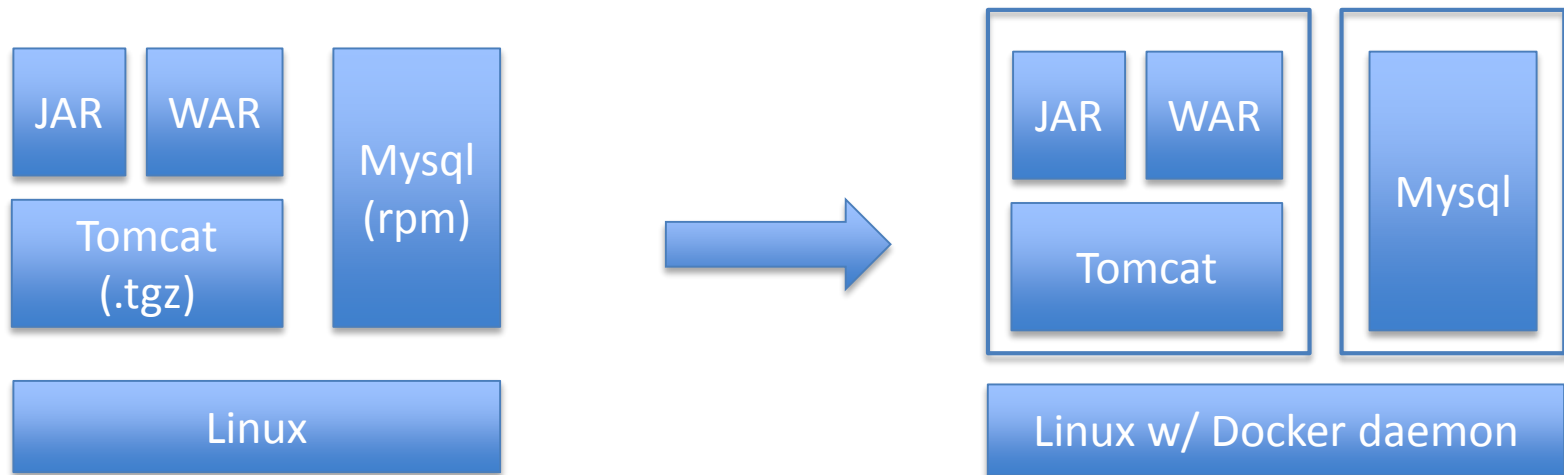
Docker bursts onto the scene

	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?

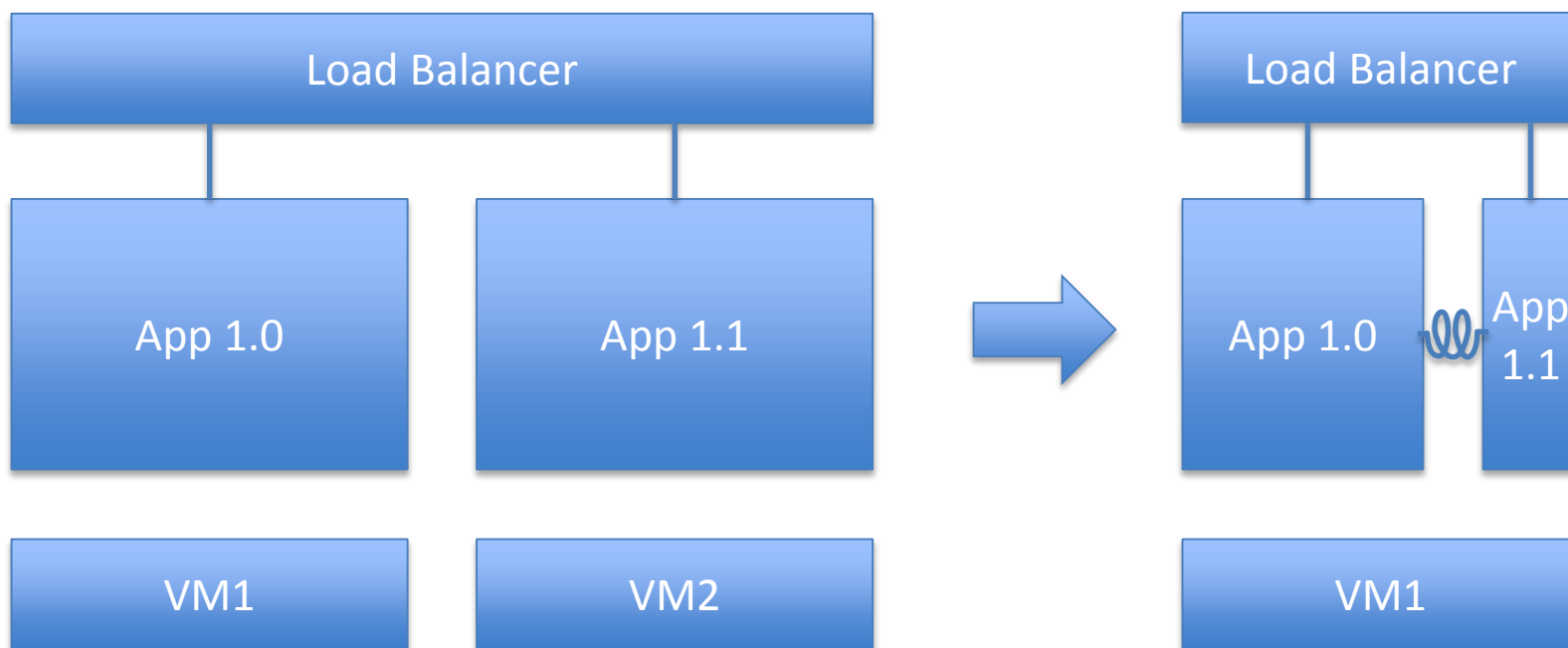
- Not a replacement for VM
- As an application packaging format, it is similar to JAR, rpm, etc.



You do not have to use microservices to run Docker

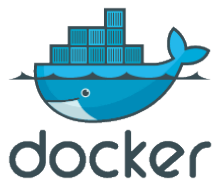
Why do people use Docker?

One benefit: higher resource utilization



But more importantly: consistent developer experience

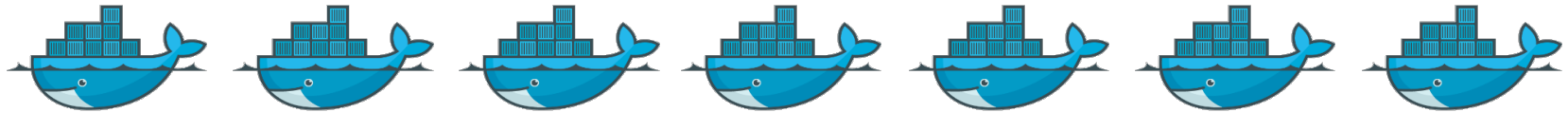
Fact: vast majority of Docker users run on AWS



Developer

Operations

The new private cloud: private container service



Private Container Service

Linux

Linux

Linux

Linux

Linux

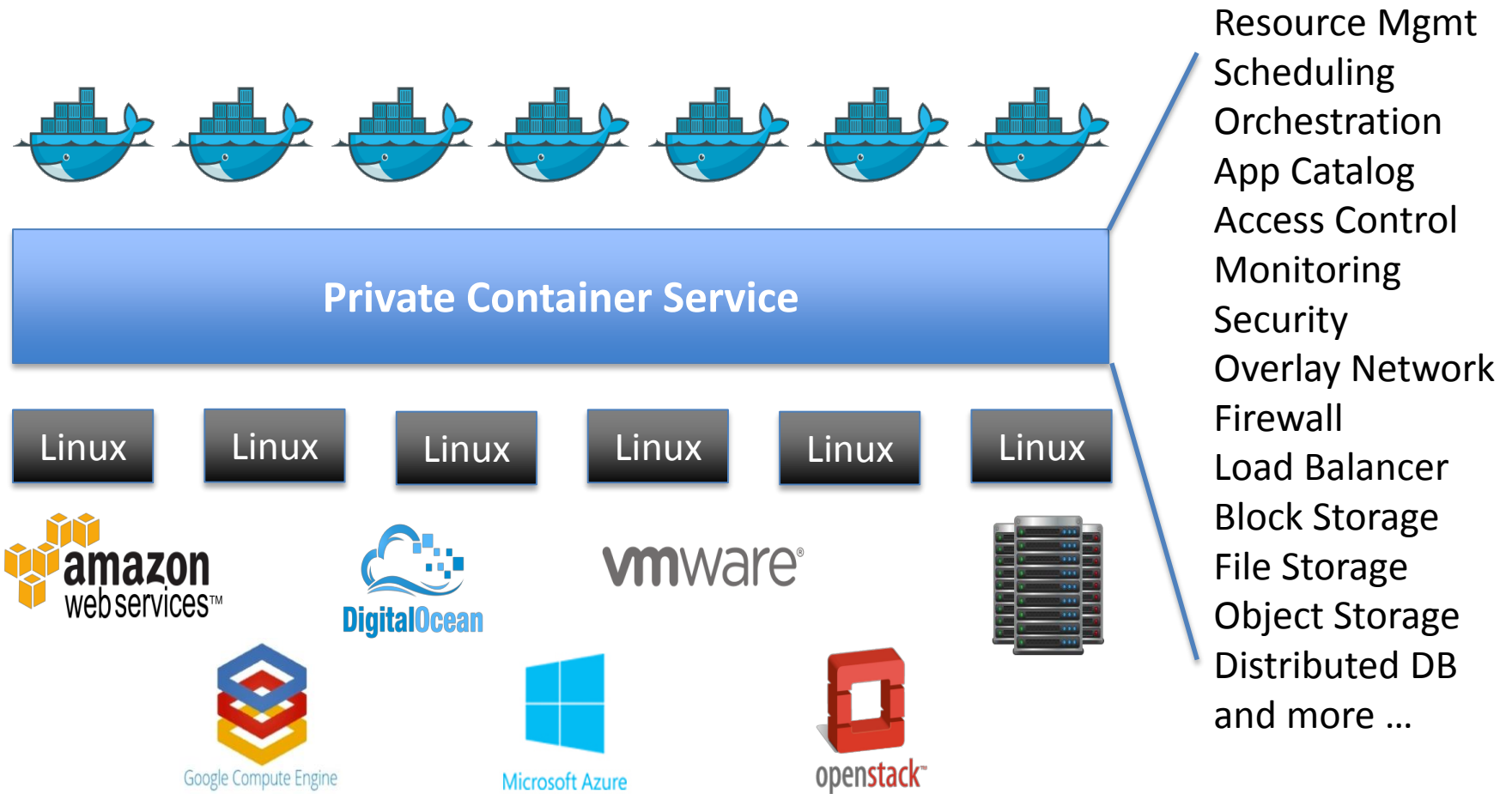
Linux



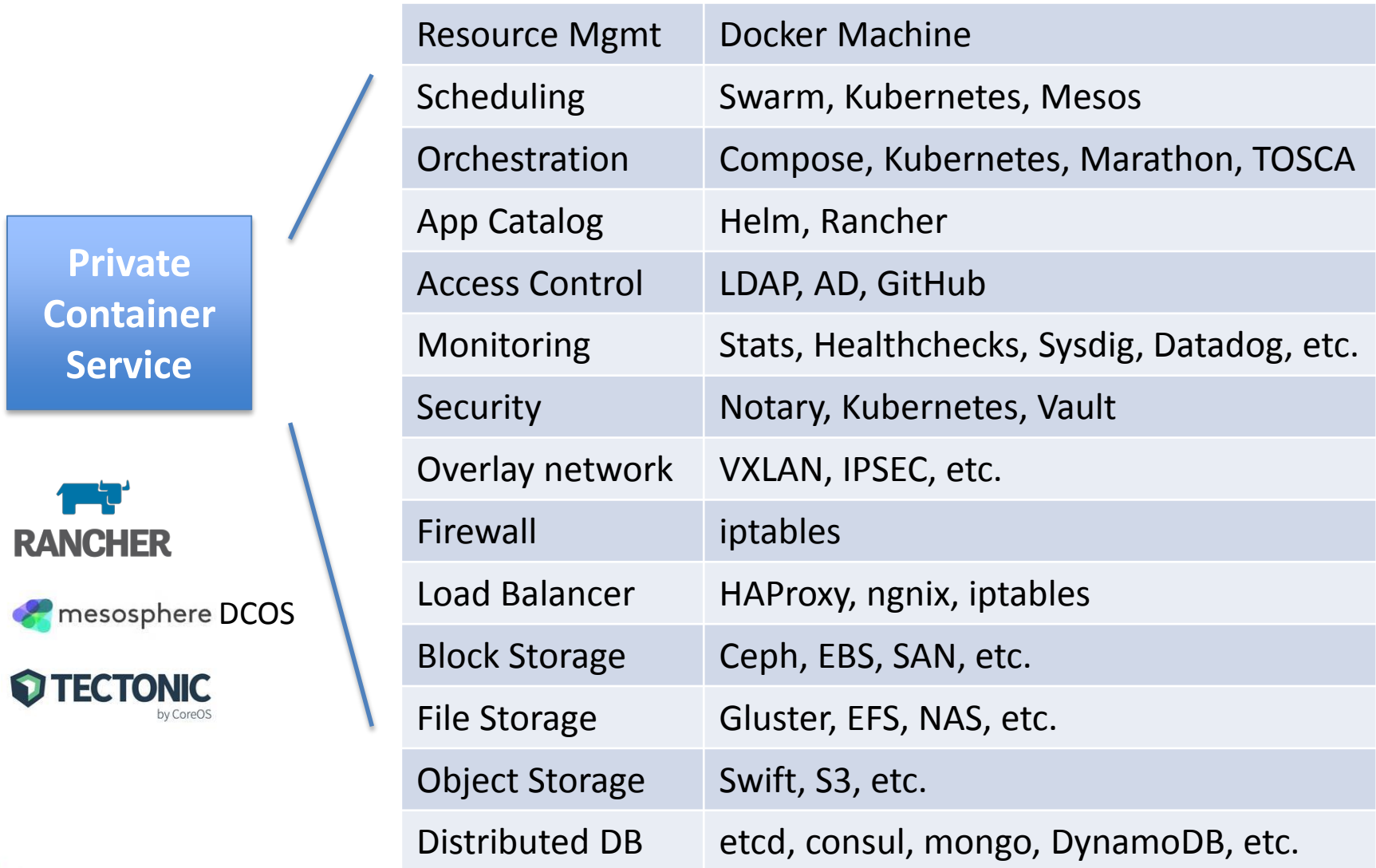
vmware®



What is in a private container service

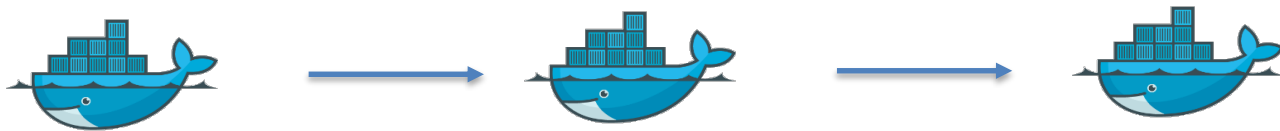


What is in a private container service



Implications of private container services

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



Private Container Service



Development



Test



Production

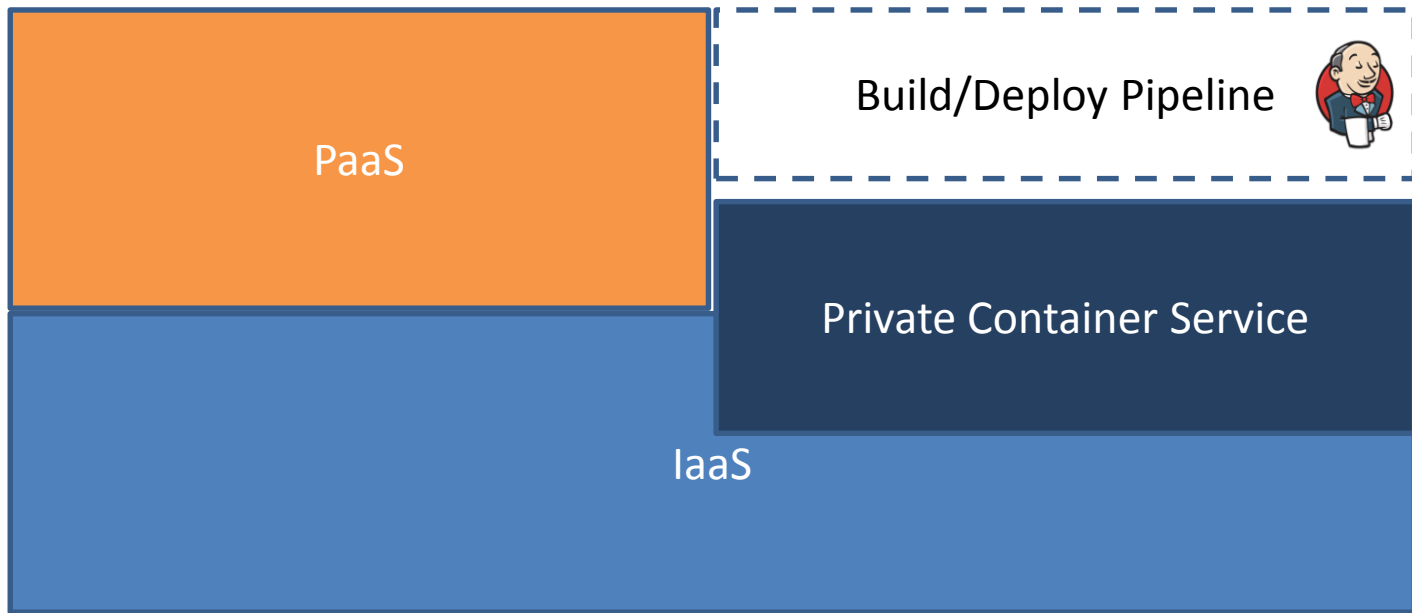
An analogy



Browser

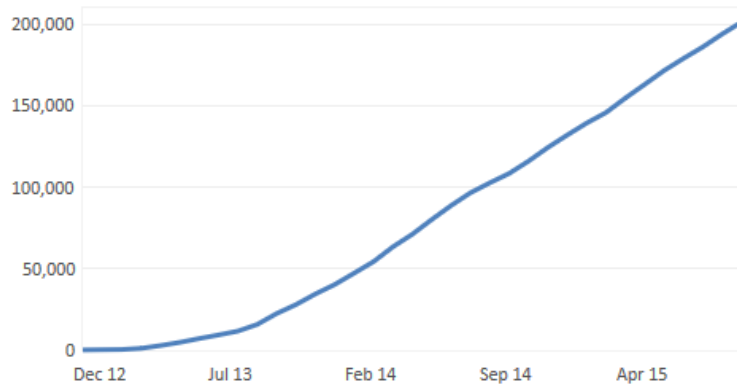


What about PaaS?



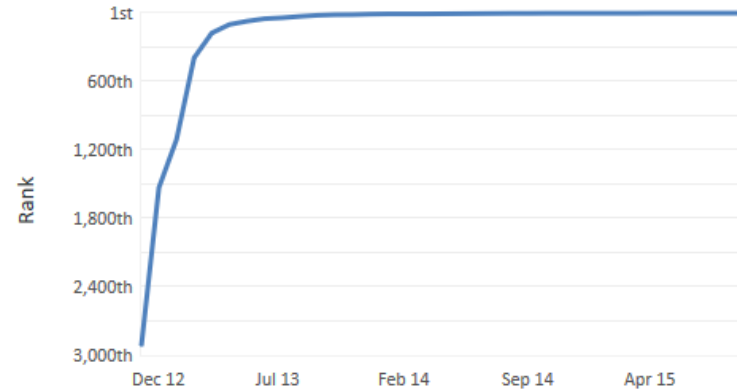
Miraculous growth of DigitalOcean

DigitalOcean's Worldwide Growth



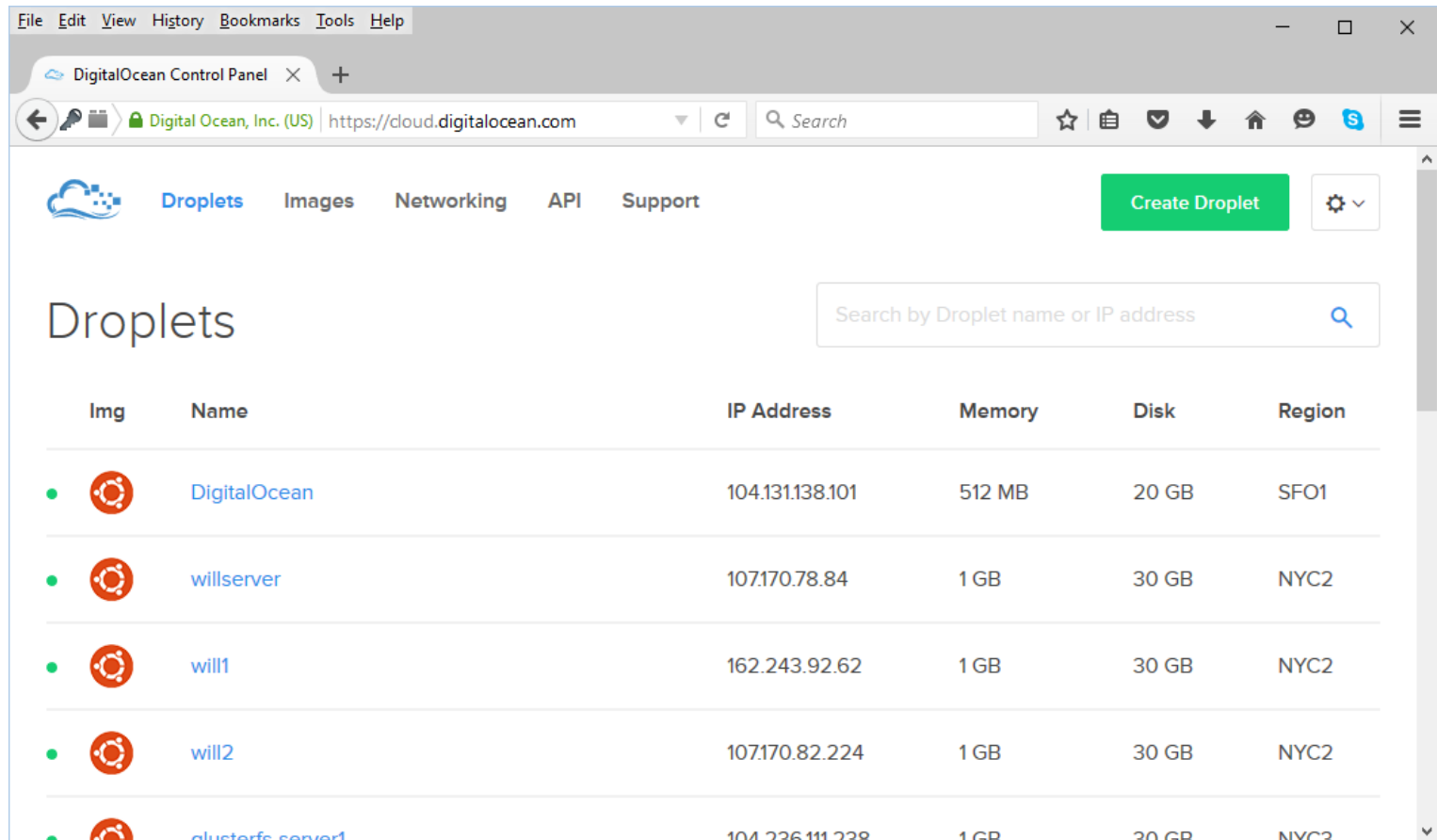
ΠETCRAFT

DigitalOcean's Worldwide Rank








ΠETCRAFT

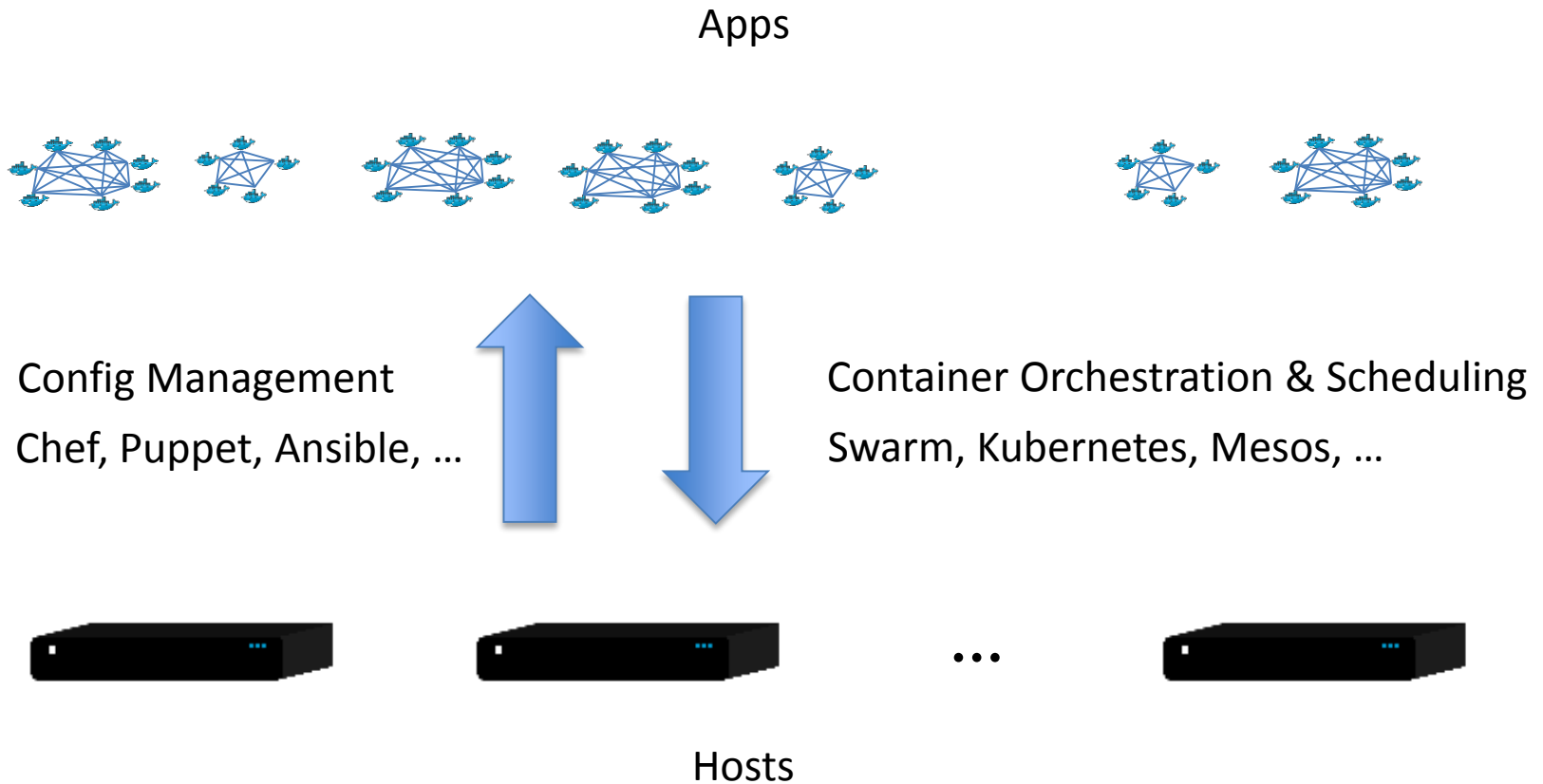
Simplicity wins



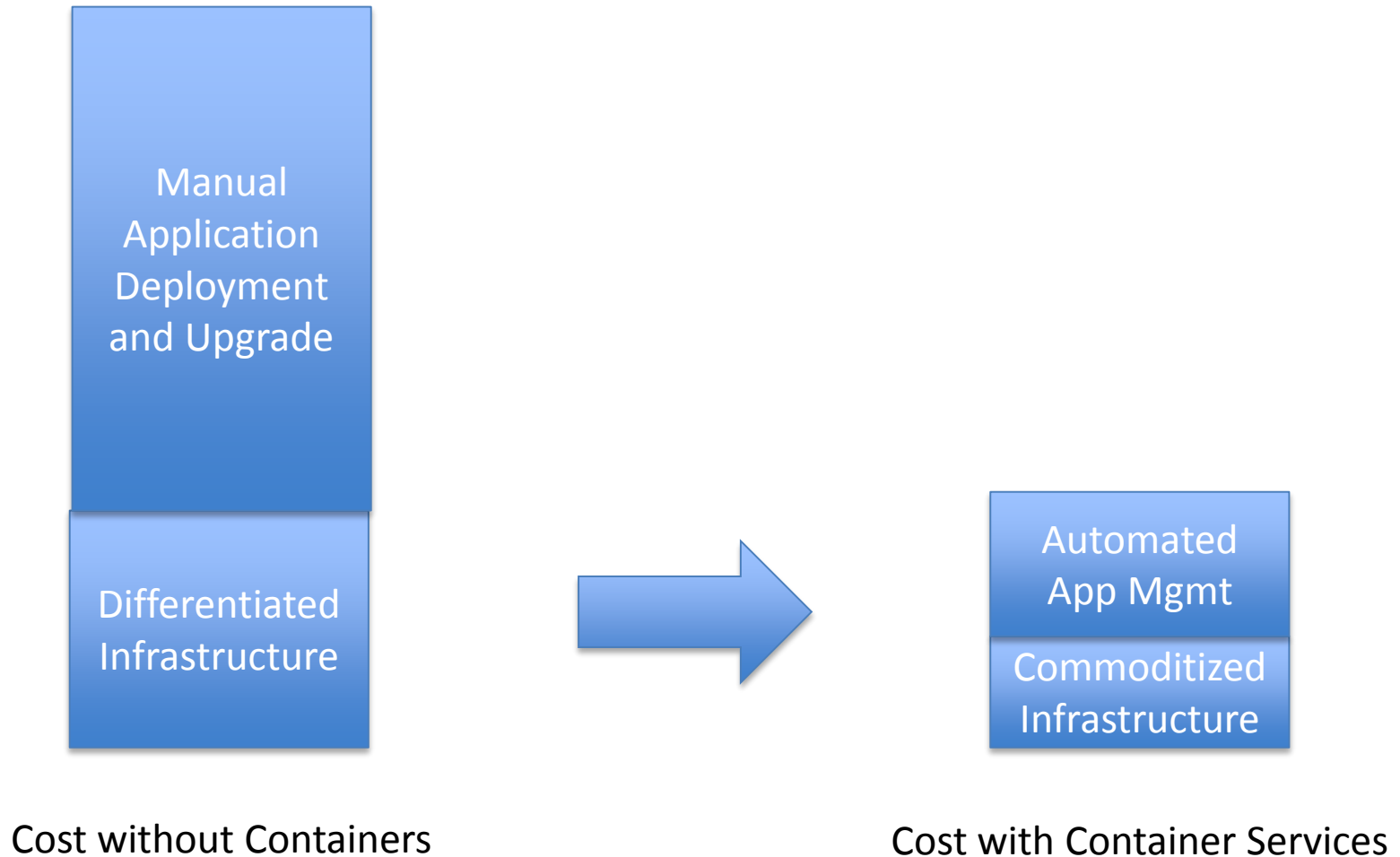
The screenshot shows the DigitalOcean Control Panel in a web browser. The page title is "Droplets" and it features a search bar with the placeholder text "Search by Droplet name or IP address". Below the search bar is a table listing five droplets. Each row includes a status icon (a green dot), a droplet icon, the droplet name, its IP address, memory size, disk size, and region. The droplets are: DigitalOcean (512 MB, 20 GB, SFO1), willserver (1 GB, 30 GB, NYC2), will1 (1 GB, 30 GB, NYC2), will2 (1 GB, 30 GB, NYC2), and clusterfs-server1 (1 GB, 30 GB, NYC3). The browser's address bar shows the URL "https://cloud.digitalocean.com".

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

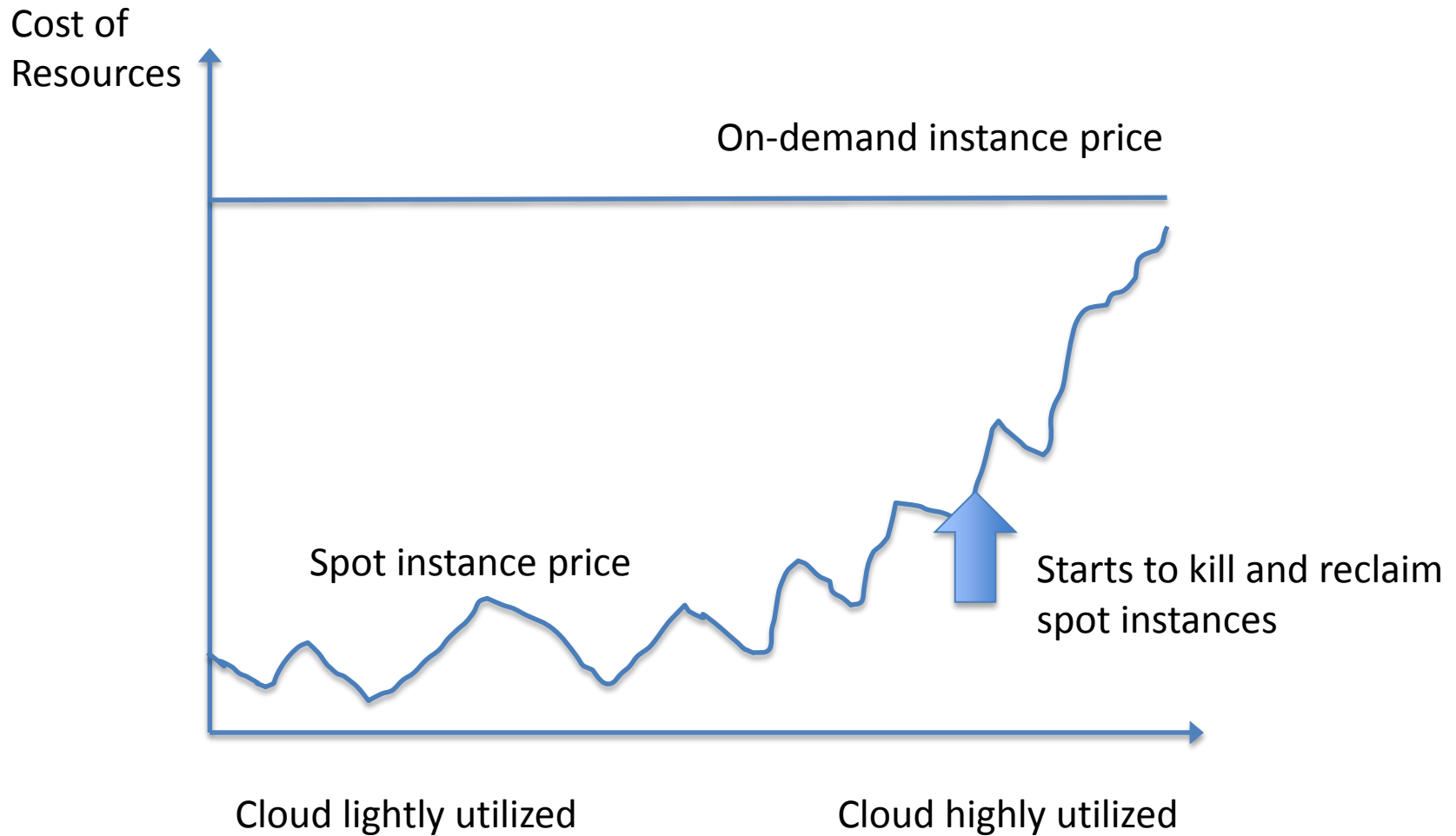


Data Center



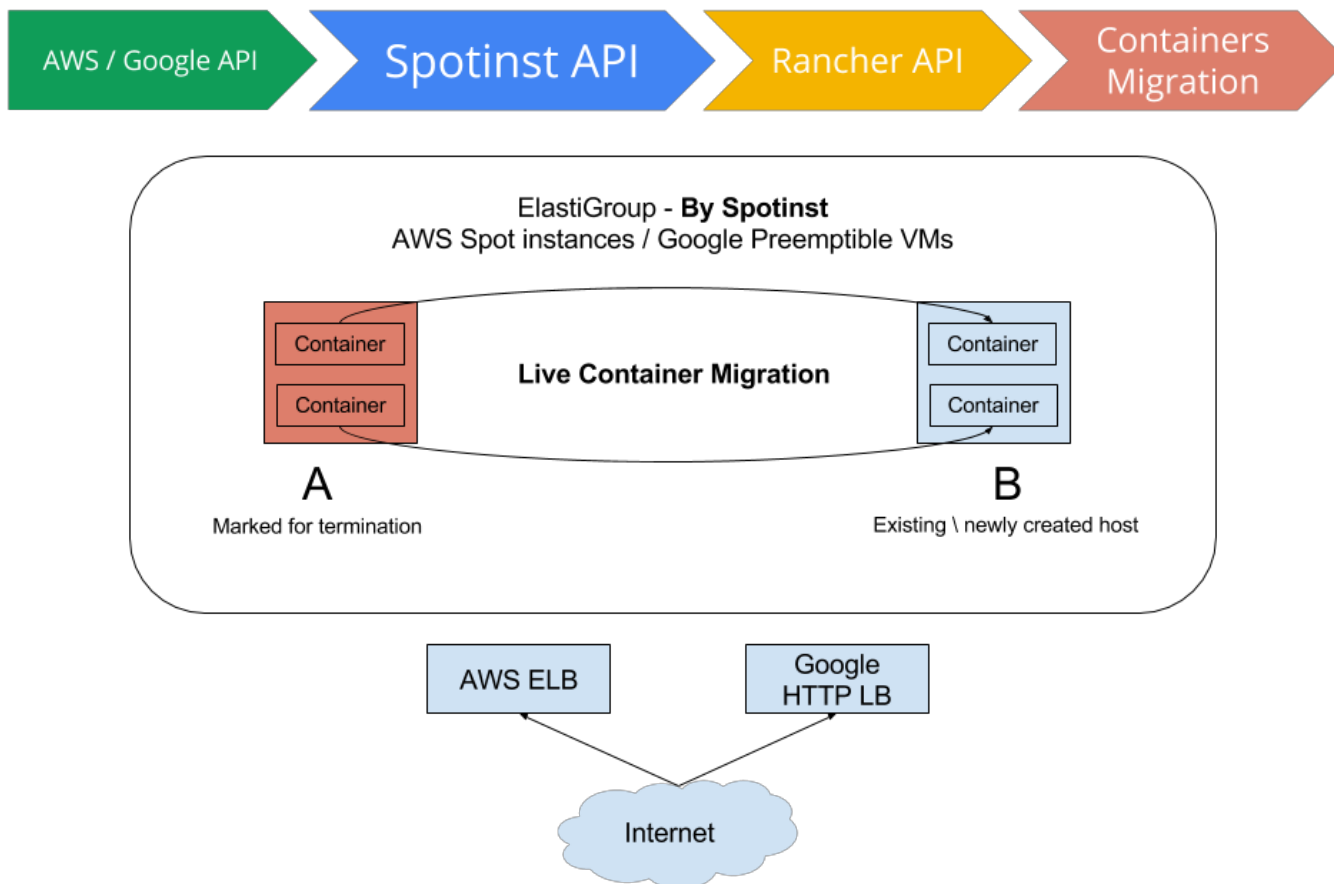
Cloud

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

Thanks!

