### **DEVOPS SUMMIT – RSA 2020**





#### TAULA RODONA

#### "DEVOPS Y SEGURIDAD CLOUD"

**ISACA BCN - 3/3/2020** 

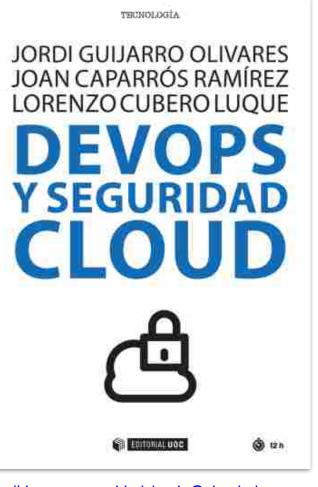




**Barcelona Chapter** 





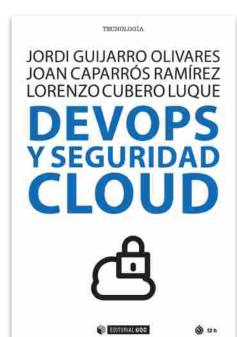






16:15 Cloud & DevOps - Jordi Guijarro
16:30 Agile & DevOps - Lorenzo Cubero
16:45 DevOps tools & Usecase - Joan Caparrós
17:00 Taula Debat -> Nou Repte: "DevSecOps" (+ Francisco Rueda - AgileCoeinf)





## **Els Autors**

**JORDI GUIJARRO** 















THUNOLOGÍA

JORDI GUIJARRO OLIVARES JOAN CAPARRÓS RAMÍREZ LORENZO CUBERO LUQUE

## DEVOPS Y SEGURIDAD CLOUD



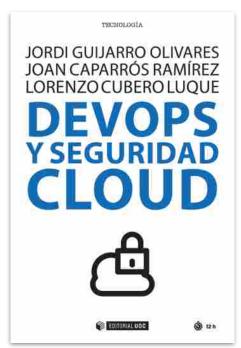




## ¿Què podem trobar en el llibre?

http://devopsyseguridadcloud.cloudadmins.org





#### Parlem de...

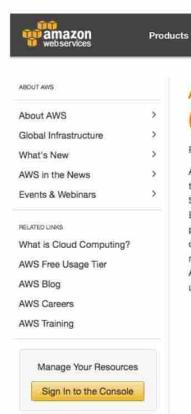
## Cloud DevOps!



#### The Beginning of the Public Cloud

August 2006 - 13 Years Ago

More -



## Announcing Amazon Elastic Compute Cloud (Amazon EC2) - beta

English 🕶

Sign In to the Console

My Account -

Posted On: Aug 24, 2006

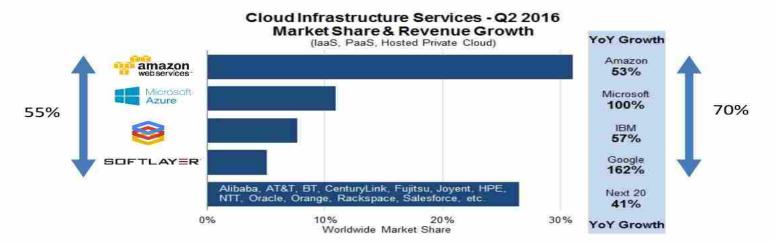
Solutions

Pricing

Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides resizable compute capacity in the cloud. It is designed to make web-scale computing easier for developers. Just as Amazon Simple Storage Service (Amazon S3) enables storage in the cloud, Amazon EC2 enables "compute" in the cloud. Amazon EC2's simple web service interface allows you to obtain and configure capacity with minimal friction. It provides you with complete control of your computing resources and lets you run on Amazon's proven computing environment. Amazon EC2 reduces the time required to obtain and boot new server instances to minutes, allowing you to quickly scale capacity, both up and down, as your computing requirements change. Amazon EC2 changes the economics of computing by allowing you to pay only for capacity that you actually use.

#### The State of the Public Cloud Market

Public Cloud Market Becoming an Oligopoly



#### Highly concentrated market

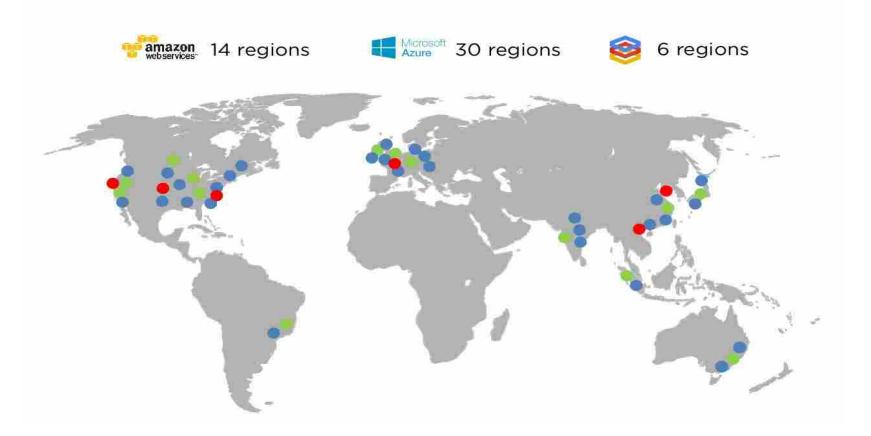
The 4 big players aggregate the 55% and the next 20 players the 25%

#### Increasing concentration

The 4 big players growing 70% and the next 20 players 41%

#### **Public Cloud Datacenter Footprint**

A Global Infrastructure



#### A Fierce Competition to Grow Data Centers

Focus on Deploying Massive, Centralized Datacenters

	Zones (2016)	Servers (Millions)	New Zones in 2017
amazon webservices	38	2-4	9
Microsoft Azure	30	1-3	8
	31	0.5	-
SOFTLAYER	6	0.5-1	8

Each zone can have 1 or more datacenters Most datacenters house between 50K and 80K servers

The 4 big players house between 4 and 8 millions of servers

This number is estimated to **grow 25% annually** (probably much higher if we consider their 70% annual growth in revenues)

#### Sources:

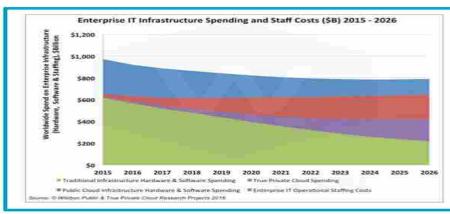
- Company web sites
- http://datacenterfrontier.com/inside-amazon-cloud-computing-infrastructure
- http://www.datacenterknowledge.com/archives/2013/07/15/ballmer-microsoft-has-1-million-servers/

#### **Distributed Cloud Computing**

#### Public Cloud Is a Fraction of IT Infrastructure Market

Public Cloud only represents 12% of Internet computing power
10 million blade servers shipped annually
50 million servers in operation in 2016 (not including public cloud)

Public Cloud represents a tiny fraction of existing data centers 3 million data centers only in the U.S. in 2013 Number datacenters growing, peaking at 8.6 M worldwide by 2017



#### IT Infrastructure Spending in 10 Years

- Public cloud
- Private cloud on-premises and off-premises with hosting services, colocation or managed hosting
- Traditional IT

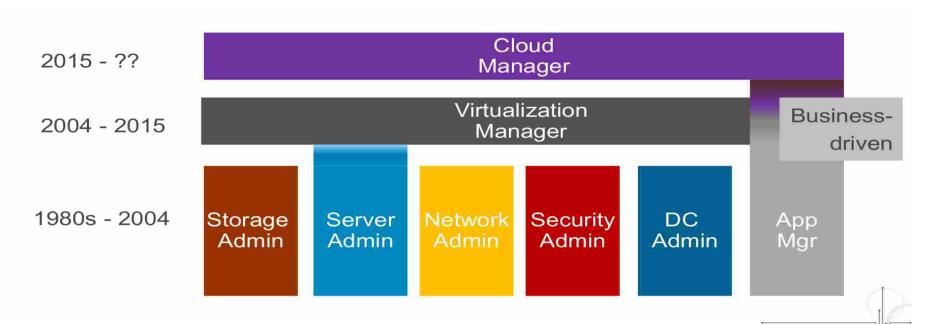
Most enterprises, 68%, run less than 20% of their workloads in the cloud

#### Sources

- http://www.gartner.com/newsroom/id/3530117
- http://energy.gov/eere/articles/10-facts-know-about-data-centers
- http://worldstopdatacenters.com/idc-number-of-data-centers-will-peak-at-8-6-million-in-2017-then-begin-to-decline/
- http://www.forbes.com/sites/louiscolumbus/2016/03/13/roundup-of-cloud-computing-forecasts-and-market-estimates-2016/#1632a1fd74b0

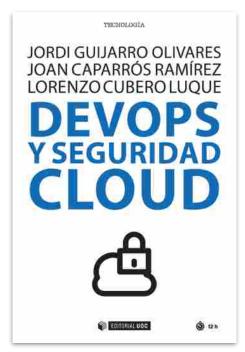
### El nou rol de Sistemes a DevOps: Enginyer Cloud

L'adopció de models cloud, la disponibilitat, l'escalabilitat de les aplicacions, la seguretat i la gestió de recursos en entorns flexibles de pagament per ús son reptes tangibles para el Cloudadmin o Enginyer Cloiud.



Source: February 21, 2013 "The Rise Of The New Cloud Admin" Forrester report



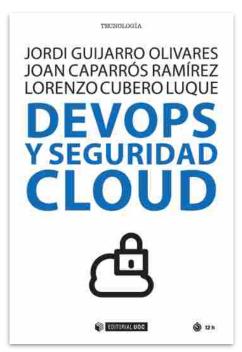


#### Parlem de...

## Mètodes àqils!



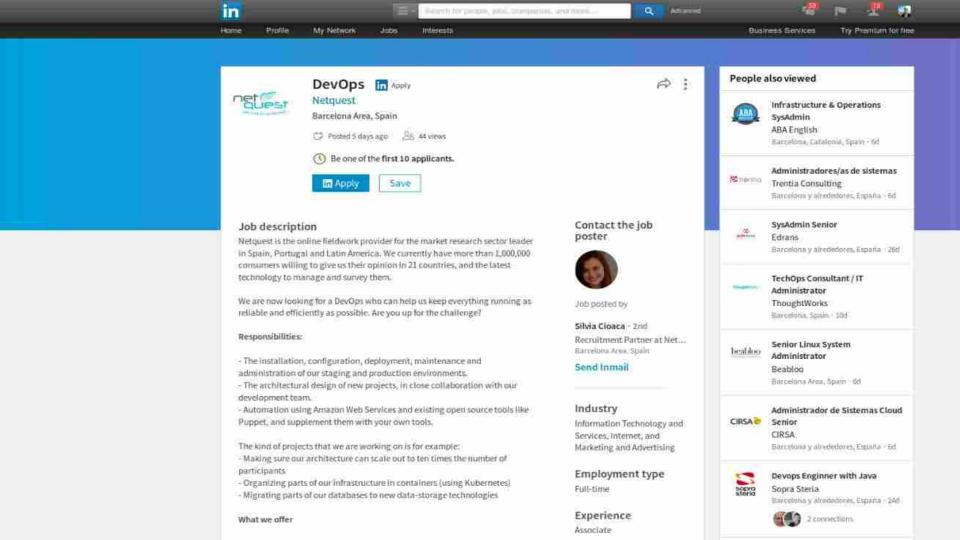


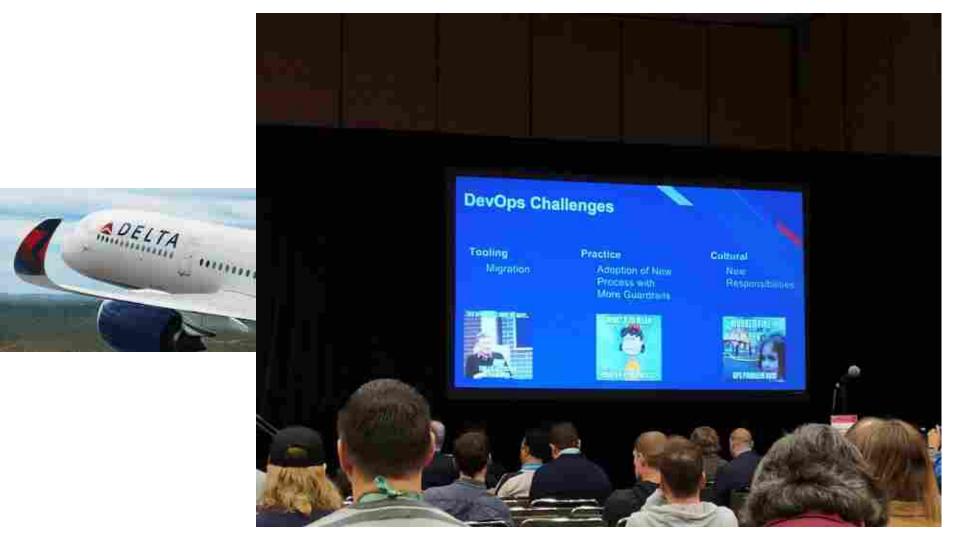


#### Parlem de...

## Learning by doing!









## RANCHER vs OPENSHIFT



INSTAL·LACIÓ: de 20 minuts a 2 hores

ACTUALITZACIONS INCREMENTALS I CONSISTENTS

SUPORT DE PLATAFORMA + CATÀLEG

ESTÀNDARO DE LA INDÚSTRIA: CNCF

COST: IX





INSTAL·LACIÓ: 3 DIES a unes poques setmanes

INFORMES d'actualitzacions amb fallades i Rollback

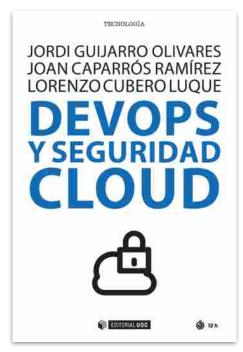
NOMÉS DE PLATAFORMA

NO CNCF

COST: 5X -IOX







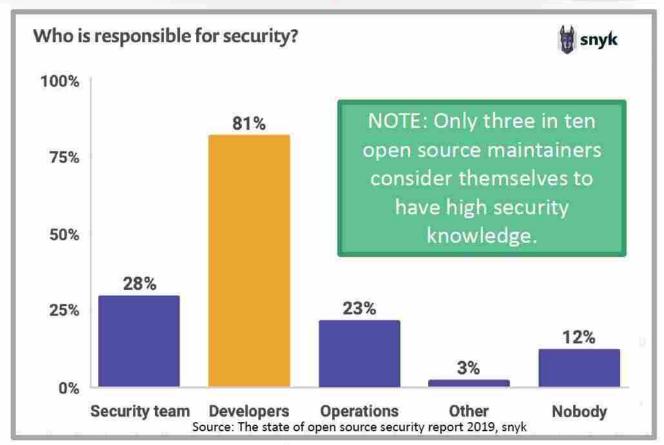
#### Parlem de...

## Flexibles i segurs!

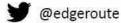




### The responsibility for security







### The goal of an application security program

#### IT IS NOT

To reach zero bugs because it's not possible!

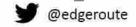
To reflect blame upon developers for security concerns.

#### IT IS

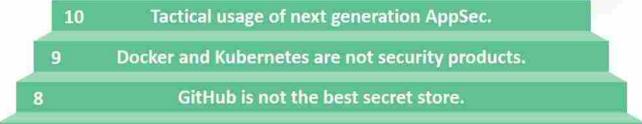
To fix bugs faster...and...to illuminate as many vulns as possible.

To measurably improve the security posture of the organization.





#### Summary of "Ten things I wish every developer knew about security"

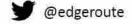


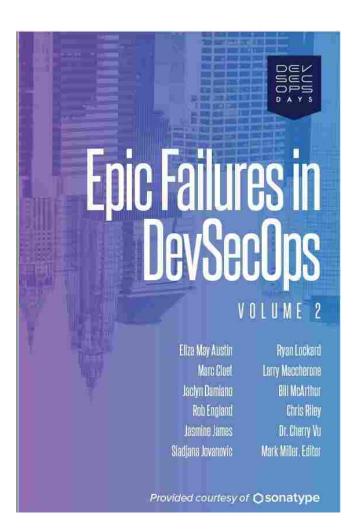
Shift {left, right, outwards} - just start.

- 7 The Sec in DevOps is silent.
- Third-party and open source vulnerabilities are rampant.
- 4 OWASP is a treasure trove of security resources.
- 3 You cannot hack yourself secure but do take a risk-based approach.
- 2 Security is your ally, not your opponent.
- 1 Everyone is a security person and the security need is pervasive.



6





2ND EDITION The DevSecOps Security Checklist sqreen 🛪



Sorteig!







TECNOLOGÍA

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# Gràcies a tots i totes!











