



The New Normal

Amazon Web Services

Julien Simon, Principal Technical Evangelist, AWS

julsimon@amazon.fr

@julsimon



15yrs

The **average lifespan**
of an S&P company
dropped from 67 years in
the 1920s to 15 years today

2/3

More than two-thirds of
IT budgets go toward
keeping the lights on

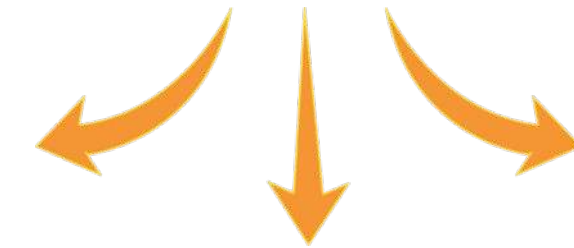
77%

of **CEOs believe security**
risk has increased in the
last few years and **65%**
believe their **risk management**
capability is **falling behind**



How This Affects You

You're left **without the necessary resources** to pursue critical business initiatives required to maintain a competitive advantage



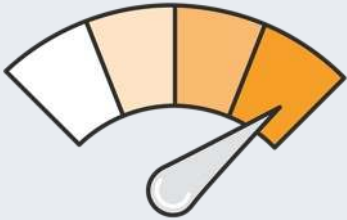
Your traditional IT model **lacks the agility** you need to keep pace with innovative startups

Insufficient security, compliance and availability can hamper your ability to compete and open the door to events that can cripple your enterprise

Responding requires a new model



Focus on differentiating your company



Innovate at start-up like speed

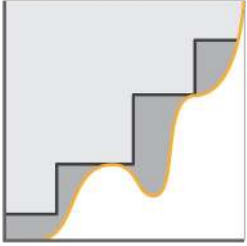


Reduce risk

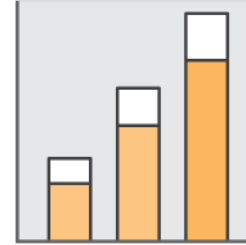
Focus on differentiation

and reduce technical debt

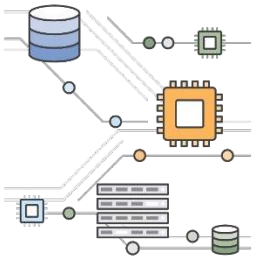
Get rid of time-consuming, expensive tasks



Stop guessing
at capacity planning



Move from risk-laden
up-front expense to
flexible variable expense



Remove complicated infrastructure
management that adds little
business value



Go global in
minutes

TimeInc.

Time Inc. is going all-in on AWS, migrating five of its global data centers to AWS. The company has already reduced costs by 75% across 80 web properties that deliver more than 120 million impressions each month.

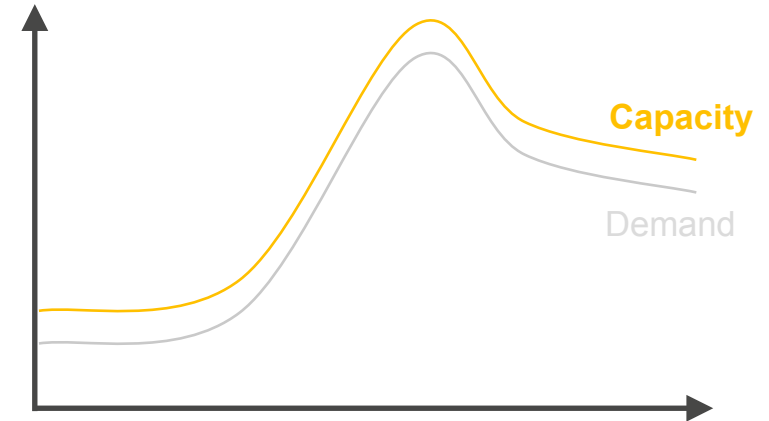
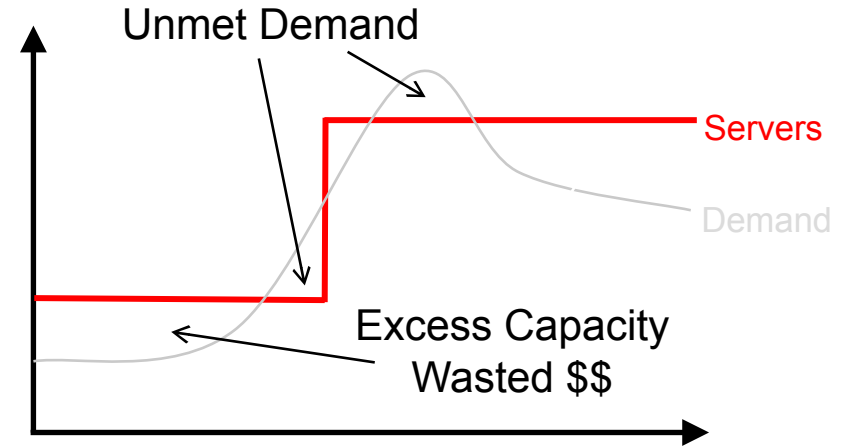
<https://aws.amazon.com/fr/solutions/case-studies/time-inc/>

Stop guessing at capacity planning

Primary driver is often to
accommodate growth

however...

Elasticity allows **waste reduction** and in effect **cost savings**



Pay only for what you need



Turn off nonproduction instances

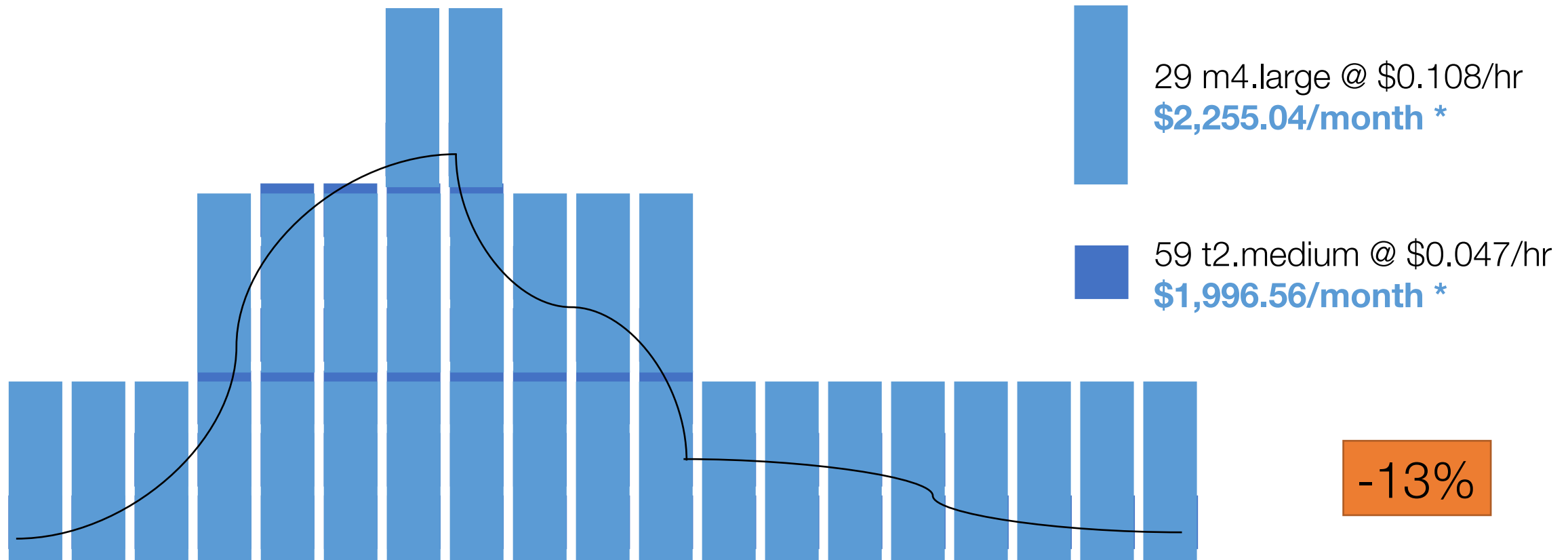
- Look for dev/test, nonproduction instances that are running always-on and **turn them off!**

Autoscale production

- Use **Auto Scaling** to scale up and down based on demand and usage (for example, spikes).

Using Auto Scaling and right-sizing to lower cost

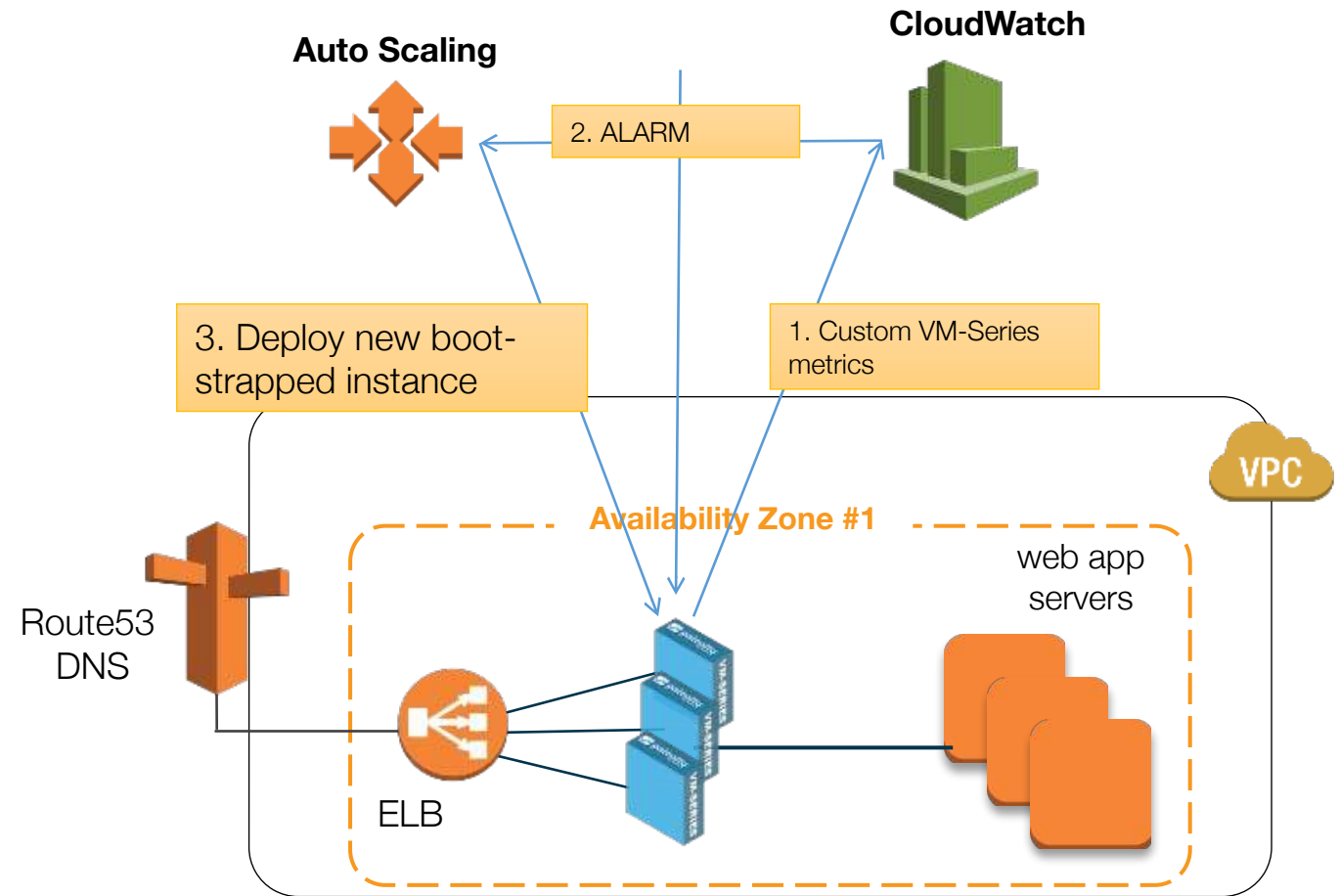
More smaller instances vs. fewer larger instances



*Assumes Linux instances in the US-East (N. Virginia) Region at 720 hours per month

Auto-scaling security with Palo Alto

- Dynamically scale VM-Series using custom metrics and native AWS tools
- Provides pre-qualified Cloud formation template that automates VM-Series scaling (up and down).
- Leverages AWS ELB & Auto scaling group along with custom VM-Series reporting metric



Let us handle Software Licensing



- AWS Marketplace offers thousands of **production-ready deployments** for various software solutions
- Launch applications with **1-Click**
- Pay **software licenses completely on-demand** or bring your own license (BYOL)



AWS reduces costs over the long term

ROI Summary for Amazon Web Services

 5 Year
ROI
560%

 Average 5 Year
Discounted Business
Benefits per Application
\$1.54M

 Payback
Period
**5.5
MONTHS**

Average Annual Benefits Per Application

 Business Productivity
and Risk Mitigation
\$181,669

 IT Staff Productivity
Gains
\$133,389

 IT Infrastructure
Cost Reduction
\$131,073



Quantifying the Business Value of Amazon Web Services

EXECUTIVE SUMMARY

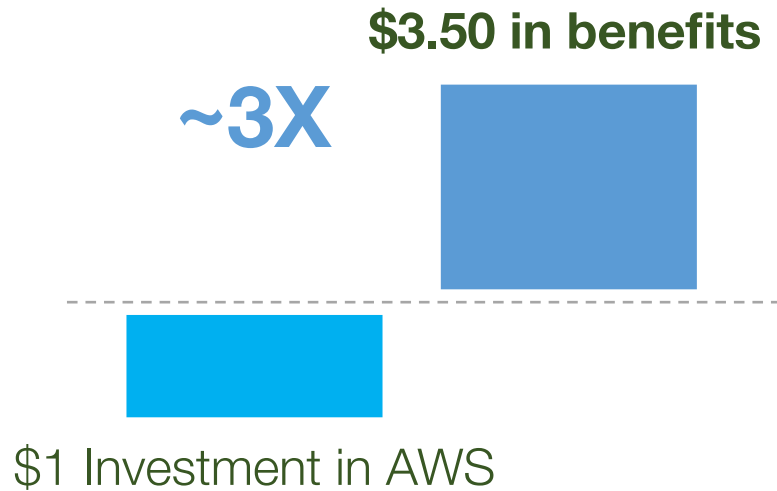
Businesses are being challenged to meet new customer expectations influenced by consumer centric applications powered by cloud services. It is important to understand the value of cloud services for enterprises while embarking on the digital transformation journey. This paper measures the benefits that Amazon Web Services (AWS) provides to organizations which can be used to guide cloud adoption decisions.

IDC interviewed ten organizations from a cross section of industries using Amazon Web Services (AWS) to measure how AWS impacts their business operations and IT environments. These organizations are capturing substantial business value by making their operations more efficient and cost-effective, and by better serving their customers with accelerated solution delivery. On average, IDC calculates that these Amazon customers will capture five-year business benefits worth over \$1.5 million per application they are running in the AWS environment, and earn a return on their investment in AWS of 560%. They will achieve this value because AWS:

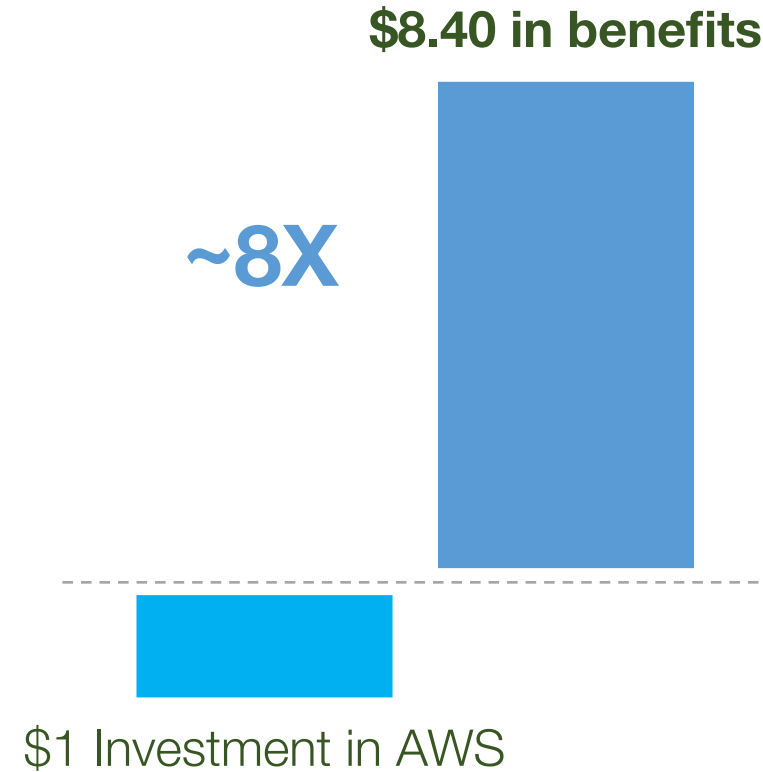
- » Supports expanding application environments at a much lower cost than an on-premise or hosted environment
- » Requires less time to manage, administer and update
- » Provides agility, scalability, and improved performance to better address business opportunities and enhance user productivity
- » Reduces risk and minimizes the frequency of application downtime

...and these benefits increase over time

At 36 Months of using AWS



At 60 Months of using AWS



According to IDC, this relationship between length of time using AWS and return is due to customers leveraging the more optimized environment to generate more applications along a learning curve.

Go global in minutes

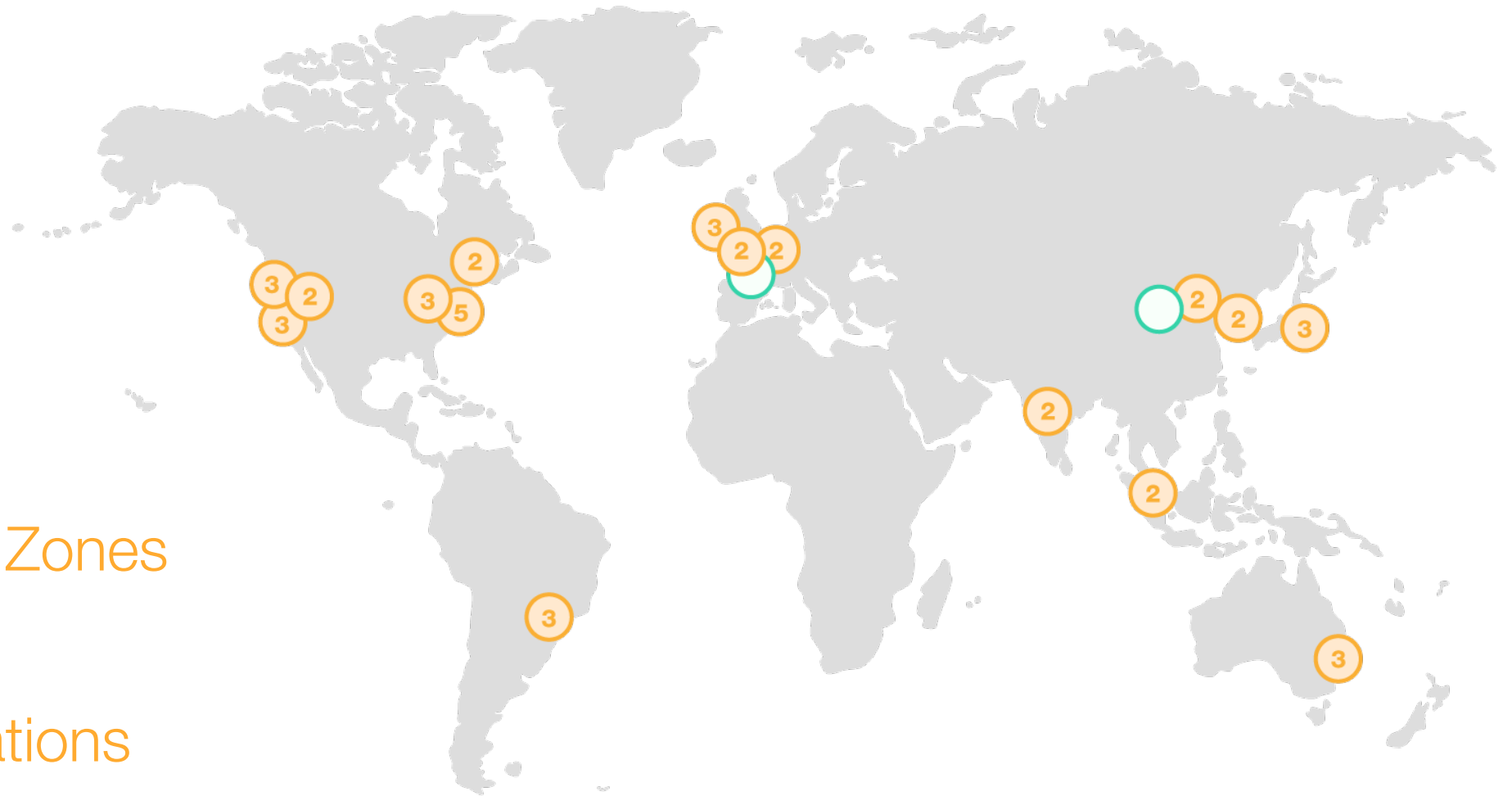
16 Regions

+2 coming

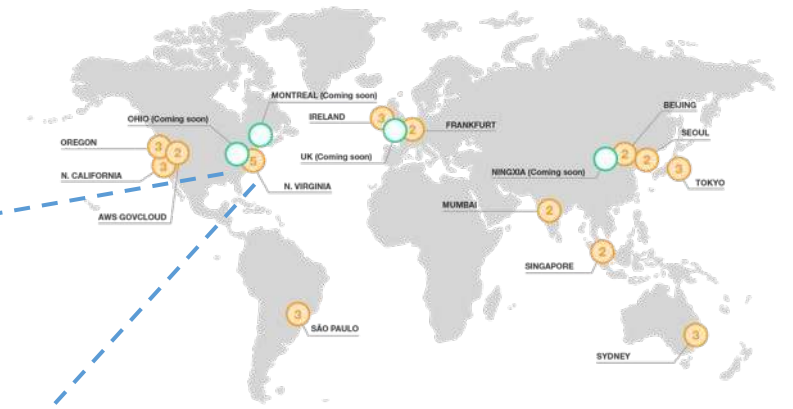
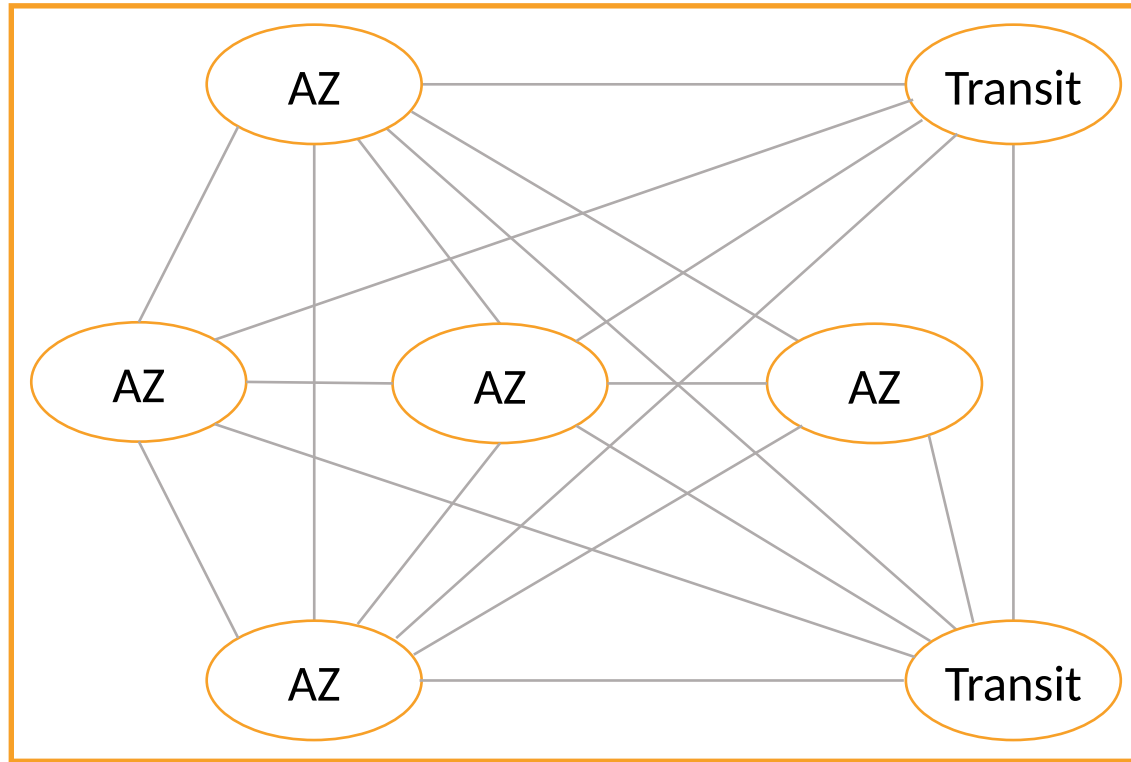


42 Availability Zones

68 Edge Locations

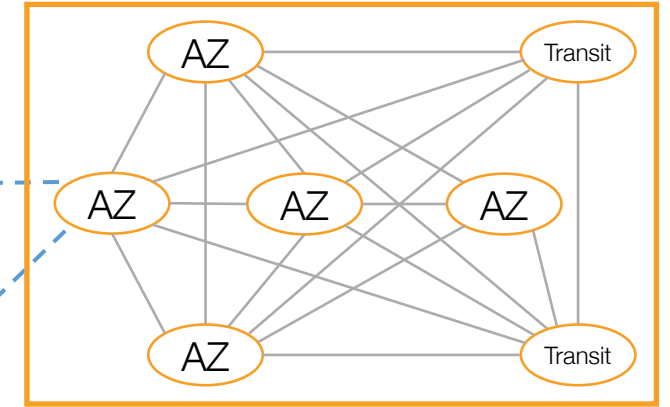
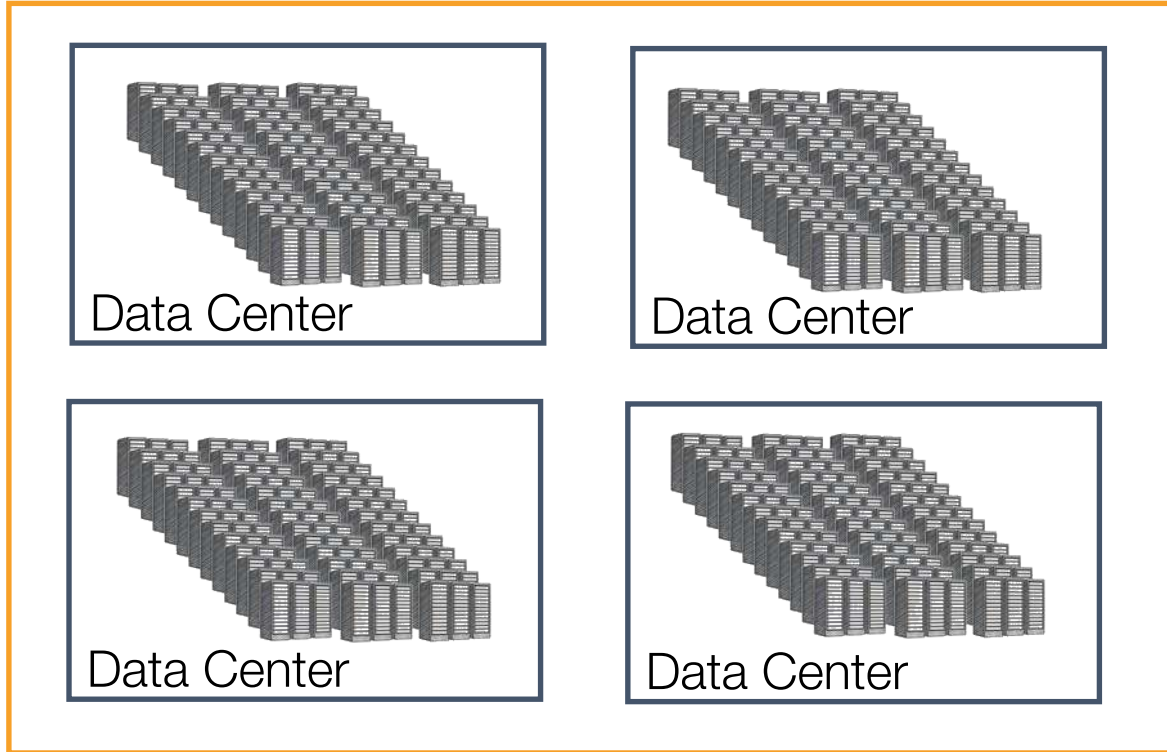


AWS Region



- Mesh of Availability Zones (AZ) and Transit Centers
- **Redundant** paths to transit centers
- Transit centers connect to:
 - Private links to other AWS regions
 - Private links to customers
 - Internet through peering & paid transit
- AZs <2ms apart & usually <1ms

AWS Availability Zone



- Regional cluster of discrete DCs
- Separate redundant power, networking, connectivity and facility
- All regions have 2 or more AZs
- Each AZ is 1 or more DC
 - No data center is in two AZs
 - Some AZs have as many as 6 DCs
- DCs in AZ less than $\frac{1}{4}$ ms apart



GE is migrating **9000 workloads** over to AWS

Intends to reduce the number of datacenters from **34** down to **4**

GE Oil & Gas

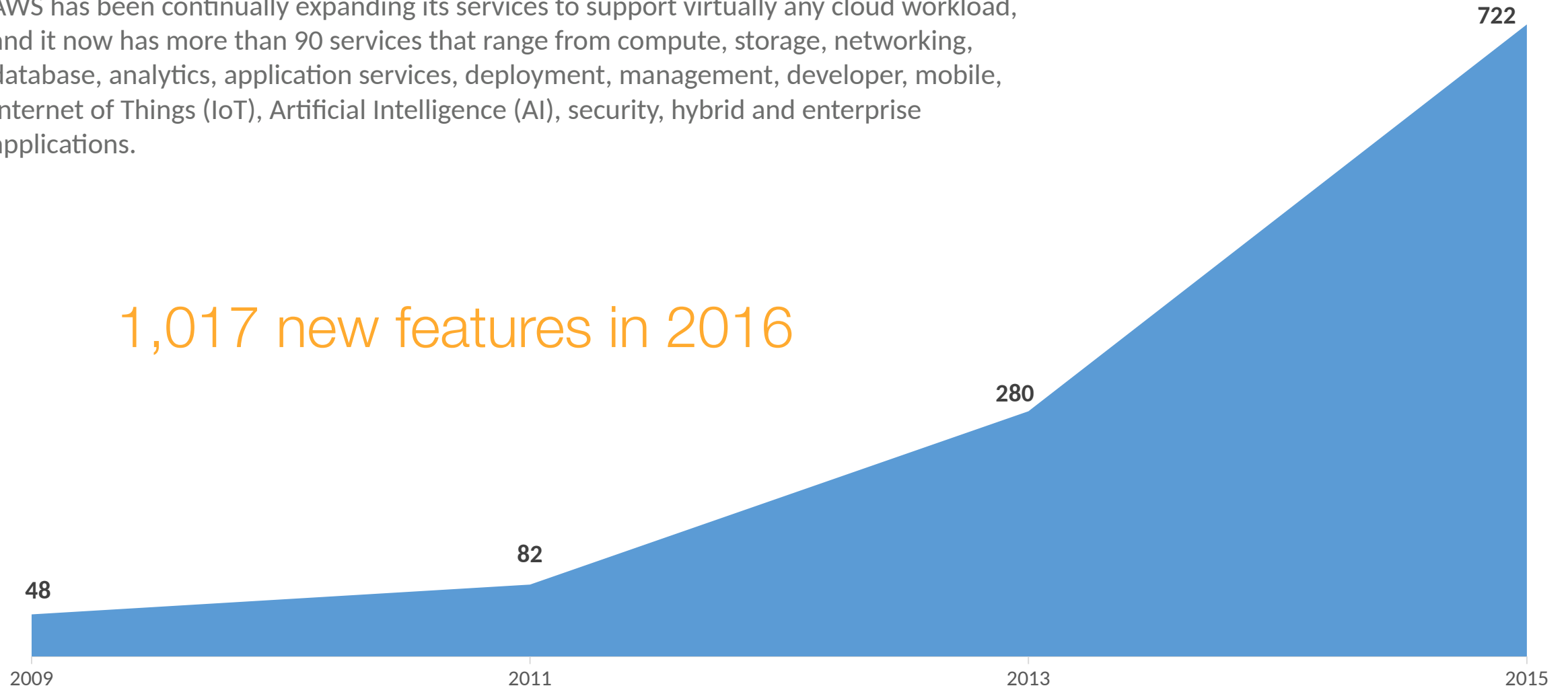
Business Agility	Operational Resilience	Cost Avoidance	Workforce Productivity	Operational Costs
<ul style="list-style-type: none">• 77% faster to deliver business applications• Rapid experimentation• Reduced technical debt• Streamlined M&A activity	<ul style="list-style-type: none">• 98% reduction in P1/P0's• Improved security posture• 15 cloud services created• Improved performance	<ul style="list-style-type: none">• 52% average TCO savings• 80% cloud first adoption	<ul style="list-style-type: none">• 15 automated bots developed• 8 cloud migration parties• Shift to self-service culture• DevOps in Practice	<ul style="list-style-type: none">• 35% reduction in compute assets (792)• 50 applications decommissioned• \$14M YOY Savings
<div><div><div>\$14.2M Investment</div><div>+</div><div>18 Months</div><div>+</div><div>Progress Focus</div><div>=</div><div>311 Apps in Cloud</div><div>&</div><div>\$14M YOY Savings</div></div></div>				

Innovate faster than ever before

AWS Innovation

AWS has been continually expanding its services to support virtually any cloud workload, and it now has more than 90 services that range from compute, storage, networking, database, analytics, application services, deployment, management, developer, mobile, Internet of Things (IoT), Artificial Intelligence (AI), security, hybrid and enterprise applications.

1,017 new features in 2016



Leverage AWS Managed Services

- AWS Managed Services are designed to be **highly-available**, **resilient**, **secure**, **elastic** and **cost-effective**
- Maintenance becomes the responsibility of AWS
- But more importantly: **pay per use!**

Machine Learning



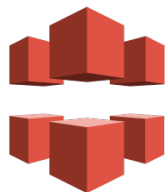
Amazon Machine Learning

Storage



Amazon S3

CDN



Amazon CloudFront

Data Warehouse



Amazon Redshift

Mobile



AWS Mobile Hub

Analytics



Amazon QuickSight

VDI



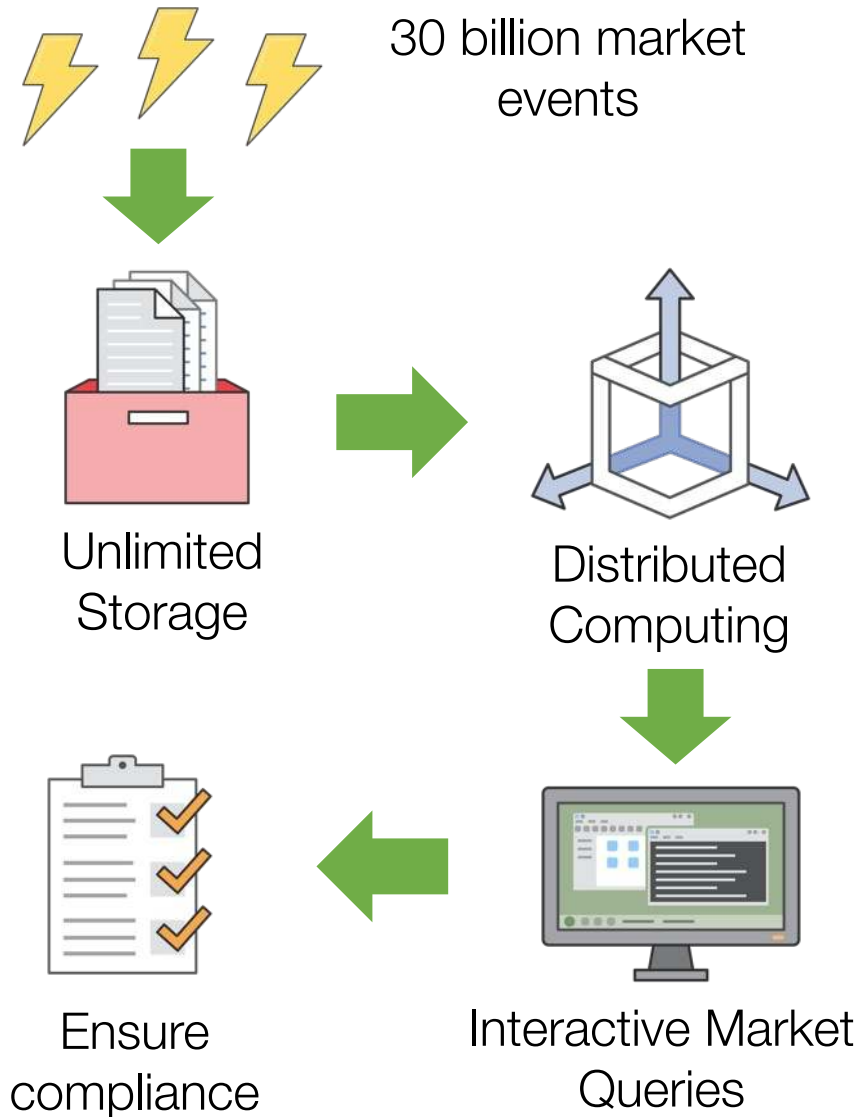
Amazon Workspaces

App Container



AWS Elastic Beanstalk

Re-Architecting Compliance



- Market surveillance platform ingests **30 billion market events** every day and **regulates** financial trading practices
- Leverages Amazon's **virtually unlimited storage** to store events and allow analysts to **interactively query market dynamics** using fully managed map-reduce (Hadoop/Hive) and Hbase clusters

“For our market surveillance systems, we are looking at about 40% [savings with AWS], but the real benefits are the business benefits: we can do things that we physically weren’t able to do before, and that is priceless.”

Steve Randich – CIO, FINRA



Cloud Adoption is not binary!

Many Worry There are Only Two Choices

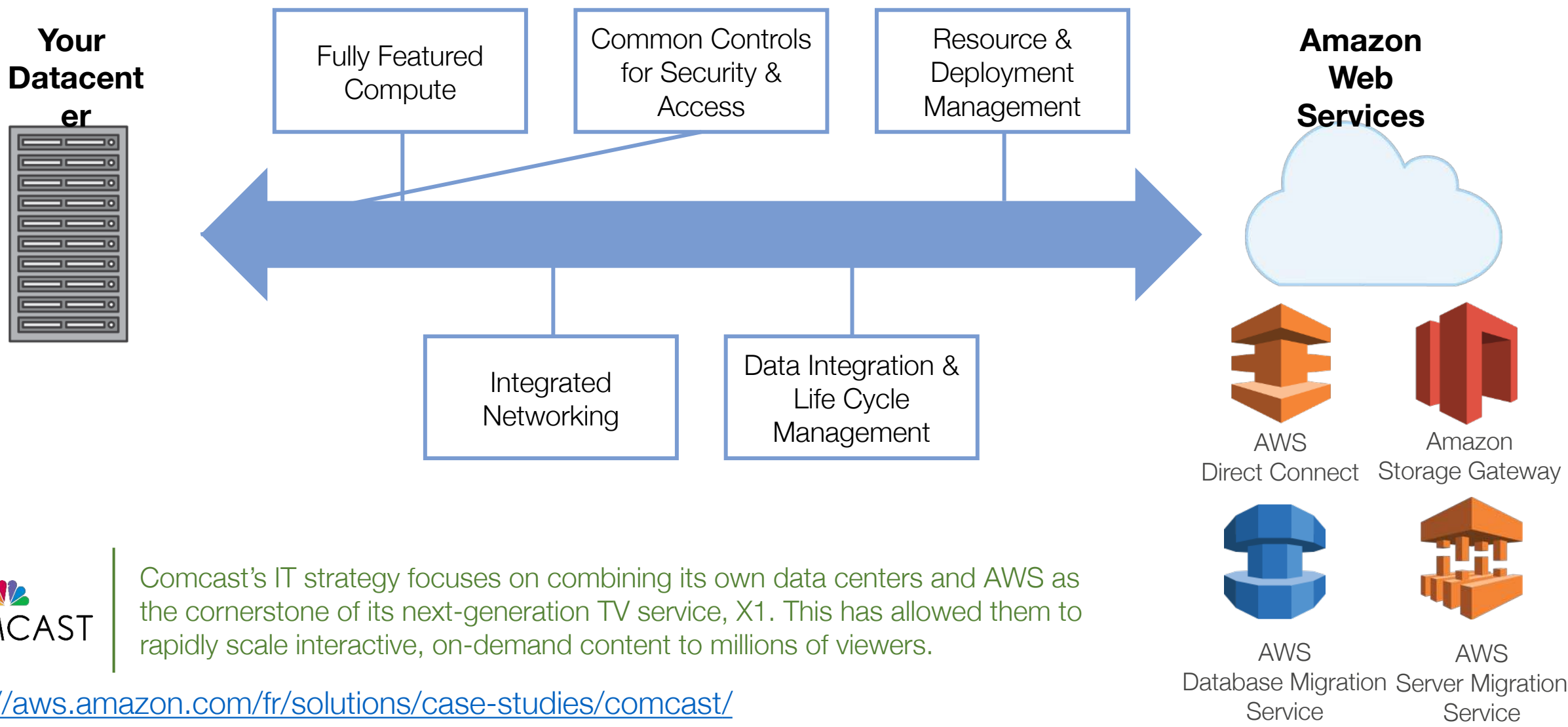
Build a
“Private”
Cloud



Rip everything out
and move to
AWS

“Either way, it’s going to take 18 months minimum”

The Cloud is not an 'All or Nothing' Choice



Comcast's IT strategy focuses on combining its own data centers and AWS as the cornerstone of its next-generation TV service, X1. This has allowed them to rapidly scale interactive, on-demand content to millions of viewers.



<https://aws.amazon.com/fr/solutions/case-studies/comcast/>

Coming in 2017: VMware on AWS

LE MONDE INFORMATIQUE

Rechercher

THÈMES DOSSIERS RÉGIONS OFFRES D'EMPLOI ÉVÈNEMENTS LIVRES BLANCS

TOUTE L'ACTUALITÉ → CLOUD → CLOUD → LE SDDC DE VMWARE MAINTENANT...

Le 14 Octobre 2016

Le SDDC de VMware maintenant exécuté dans AWS



Andy Jassy (CEO d'AWS) et Pat Gelsinger (CEO de VMware) à San Francisco pour la présentation de leur partenariat cloud. (Crédit IDG NS)

Le service annoncé par VMware dans le cadre de son partenariat avec Amazon entend faciliter le transfert et le déploiement de VM sur AWS depuis vCenter.

Le partenariat entre Amazon et VMware annoncé jeudi dernier entend faciliter l'usage de la plate-forme cloud AWS pour les clients du spécialiste de la virtualisation. Tout simplement baptisée VMware Cloud on AWS, cette offre annoncée lors d'une conférence de presse à San Francisco repose sur des versions optimisées pour le cloud computing des logiciels vSphere, VSAN et NSX (serveurs, stockage et réseau). Avec cette solution, lorsque les utilisateurs exploiteront un environnement VMware sur AWS, ils pourront bénéficier d'un cluster exécutant la pile Software Defined Data Center (SDDC) du premier dans le cloud public du second.

LE FIGARO · fr économie

ÉCONOMIE > FLASH ECO

Amazon et VMware signent un partenariat

Par Lefigaro.fr avec AFP | Mis à jour le 14/10/2016 à 06:06 / Publié le 14/10/2016 à 06:04

Amazon, devenu ces dernières années un acteur incontournable sur le marché des services dématérialisés en ligne dans le "cloud", a marqué un nouveau point jeudi avec l'annonce d'une alliance avec un ancien rival, VMware. Andy Jassy, le patron de la filiale de cloud du géant américain du commerce en ligne (AWS), a évoqué lors d'une conférence de presse à San Francisco "un important partenariat stratégique à long terme". Son homologue de VMware, Pat Gelsinger, a parlé pour sa part d'un rapprochement entre "le meilleur de deux mondes".

AWS a énormément renforcé ses infrastructures depuis dix ans pour devenir le numéro un mondial du cloud dit "public" (la location via internet d'espace dans ses centres de données à toute une série d'entreprises tierces qui y stockent leurs informations ou y font tourner leurs sites internet ou leurs applications). Cette filiale, au départ assez discrète, s'est révélée ces derniers trimestres une véritable vache à lait pour Amazon. VMware se concentre pour sa part sur les services dits de "cloud privé": quand une entreprise héberge des services en ligne pour pouvoir y accéder à distance, mais dans ses propres centres de données privés.

L'objectif est d'offrir aux clients la possibilité d'accéder à des services "hybrides", en leur permettant notamment de faire migrer facilement vers le cloud d'Amazon des logiciels et applications VMware utilisés jusqu'ici sur leurs serveurs internes, et de continuer à les utiliser dans les deux environnements. C'était impossible jusqu'à présent. Le concurrent le plus sérieux aujourd'hui d'Amazon dans le cloud, Microsoft, insistait d'ailleurs régulièrement sur sa meilleure capacité à offrir de tels services hybrides. Les produits issus du partenariat seront commercialisés par VMware à partir de mi-2017, à des tarifs non divulgués dans l'immédiat mais

Reduce Infrastructure Risk

Move Fast

OR

Stay Secure

Move Fast

AND

Stay Secure

Gain access to constantly improving **security baseline**

Every customer benefits from the tough scrutiny of other AWS customers!



FISMA



The AWS Shared Security Model

Customers

Customer content

Platform, Applications, Identity & Access Management

Operating System, Network & Firewall Configuration

Client-side Data
Encryption

Server-side Data
Encryption

Network Traffic
Protection

Customers are responsible for their security and compliance **IN** the Cloud

AWS Foundation Services

Compute

Storage

Database

Networking

AWS Global
Infrastructure

Availability
Zones

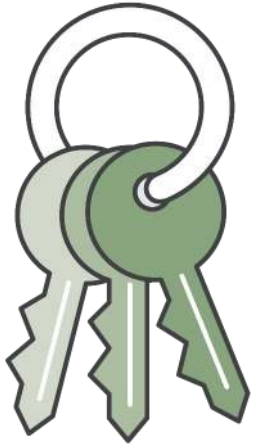
Regions

Edge
Locations

AWS is responsible for the security **OF** the Cloud



You always have full ownership and control



- Manage **your privacy objectives** any way you want
- Keep data in your chosen format
- **Move** it or **delete** it **any time**
- AWS **never** moves your data outside of your chosen AWS Region
- Customers can **encrypt** their content any way they choose



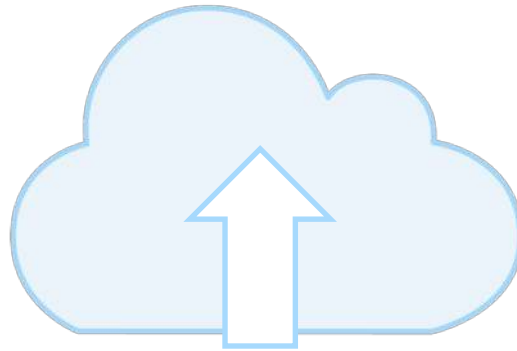
ROB ALEXANDER
CIO, CAPITAL ONE

*“The financial service industry attracts some of the worst cyber criminals. We work closely with AWS to develop a security model, which we believe enables us to operate **more securely in the public cloud** than we can in our own data centers”*

<https://aws.amazon.com/fr/solutions/case-studies/capital-one/>

Cloud computing has become the new normal

Deploying new
applications to the
cloud by default



Migrating existing
applications as
quickly as possible

AWS serves millions of active customers every month in 190 countries.

Through customer obsession and an increasing pace of innovation, AWS is the fastest technology vendor in history to reach a \$10B run rate.

Global Enterprise Customers



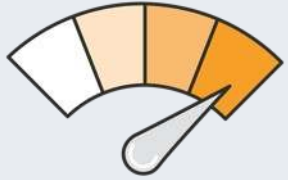
Selected AWS Customers in France



The AWS Cloud



Eliminate costly technical debt and reallocate resources so you can deliver high-value, revenue-generating projects faster.



Innovate faster and solidify your competitive advantage by merging startup agility with enterprise experience and resources.



Reduce risk by focusing resources dedicated to security, compliance and availability to the most important areas of your business.

"AWS is our trusted partner that is going to run our company for the next 140 years."

Jim Fowler – CIO, General Electric

Resources

“The Business Value of AWS:
Succeeding at Twenty-First Century Business Infrastructure” <https://d0.awsstatic.com/whitepapers/aws-whitepaper-business-value-of-aws.pdf>

Webinaire “Aperçu des services AWS”
https://www.youtube.com/watch?v=FC--jteXU_8

Webinaire “Présentation du modèle de sécurité AWS”
<https://www.youtube.com/watch?v=1QeKH-5nTlc>

Webinaire “6 stratégies pour migrer vos données dans AWS”
<https://www.youtube.com/watch?v=BJWnngwUlvE>

Nos prochains événements en France
<https://aws.amazon.com/fr/events/>

julsimon@amazon.fr
@julsimon