



# **CYBER DEFENSE LIVE**

Hong Kong 2018

## **AWS Security State of the Union**

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AWS Solutions Architect

# Why is security traditionally so hard?



4,653

Schema Conversion Tool

AWS OpsWorks

AWS Storage Gateway

Amazon Cognito

CodeCommit

AWS CodeDeploy

Amazon  
ElastiCache

Amazon Config

AWS Shield

EFS

Amazon Inspector

Amazon Lightsail

Amazon Lumberyard

Amazon Appstream 2.0

AWS Elastic Beanstalk

AWS Batch

AWS Certificate  
Manager

AWS Snowmobile

AWS Organizations

AWS CodePipeline

Amazon Lex

AWS Managed Services

Redshift

Amazon Route 53

Lambda

Amazon Kinesis Firehose

AWS Glue

Amazon  
Pinpoint

AWS X-Ray

Dynamo DB

AWS Codebuild

AWS  
Snowball

Amazon  
Athena

AWS  
Snowball Edge

Amazon RDS  
for Aurora

Amazon  
Workmail

AWS WAF

AWS OpsWorks for  
Chef Automate

Machine Learning

Amazon Rekognition

AWS Mobile Hub

AWS IoT

Device Farm

Amazon Polly

WorkSpaces

AWS Greengrass

WorkDocs

Amazon QuickSight

CloudWatch Logs

Mobile  
Analytics

AWS Personal Health Dashboard

Amazon EC2  
Systems Manager

AWS Direct  
Connect

Amazon Inspector

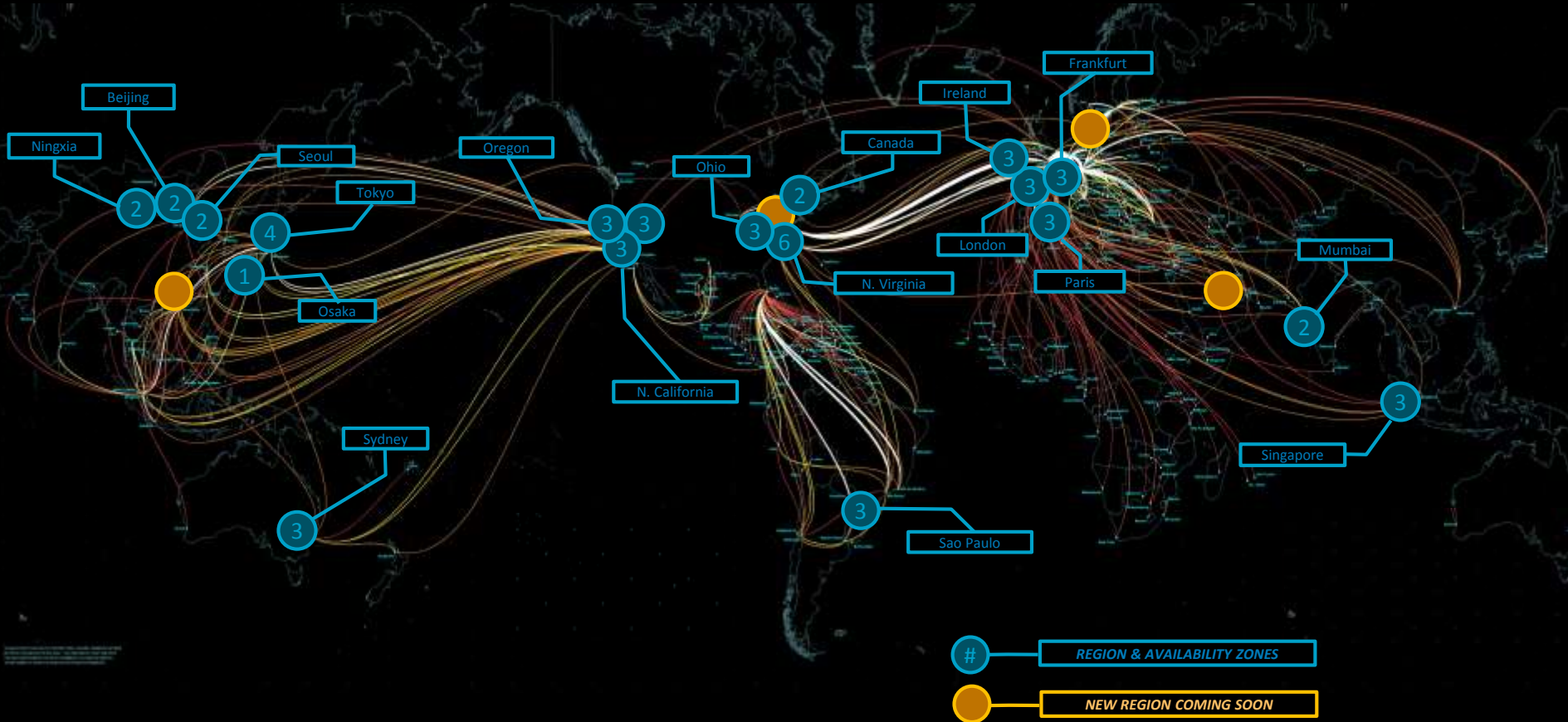
AWS Discovery  
Services

AWS Service Catalog

AWS Import/Export

AWS Step Functions

# Cloud security at massive scale

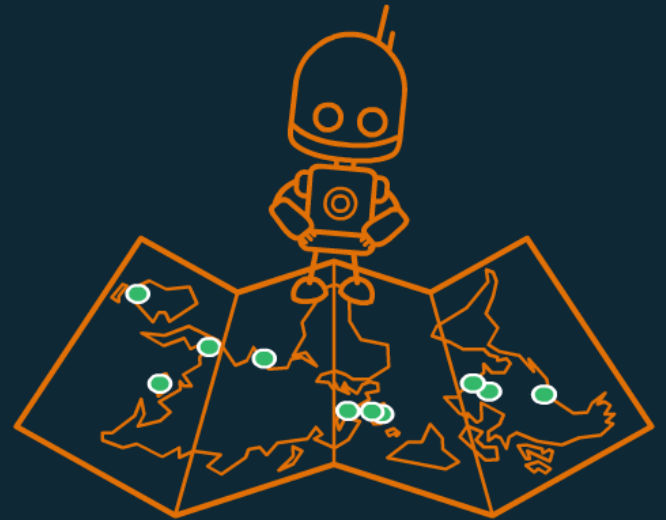


... and **growing**



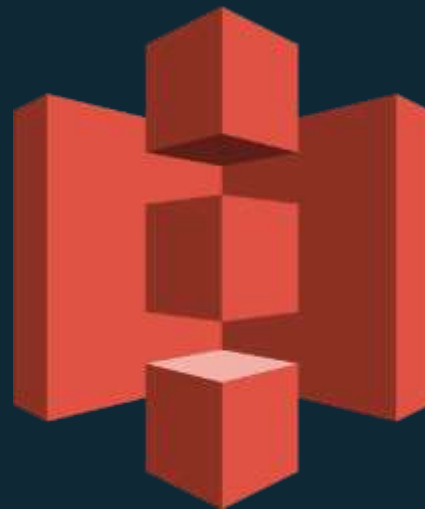
The AWS Cloud operates **54** Availability Zones  
within **18** Geographic Regions.

**12** more Availability Zones and **4** more Regions  
have been announced in Bahrain, **Hong Kong SAR**,  
Sweden, and a second AWS GovCloud Region in the  
U.S.



# The scale of the AWS Cloud

Amazon S3 holds **trillions** of objects and regularly peaks at **millions** of request per second.



Most importantly...  
humans and data don't mix!



# Why is security traditionally so hard?



**Lack of  
visibility**



**Low degree  
of automation**



# Security at Scale

SECURITY AGILITY IS MORE ACHIEVABLE THAN EVER



Automation & tooling



Machine Learning



Best practices



Partners

# The most sensitive workloads run on AWS



“We determined that security in AWS is superior to our on-premises data center across several dimensions, including patching, encryption, auditing and logging, entitlements, and compliance.”

—John Brady, CISO, FINRA (Financial Industry Regulatory Authority)



“The fact that we can rely on the AWS security posture to boost our own security is really important for our business. AWS does a much better job at security than we could ever do running a cage in a data center.”

— Richard Crowley, Director of Operations, Slack



“With AWS, DNAnexus enables enterprises worldwide to perform genomic analysis and clinical studies in a secure and compliant environment at a scale not previously possible.”

— Richard Daly, CEO DNAnexus

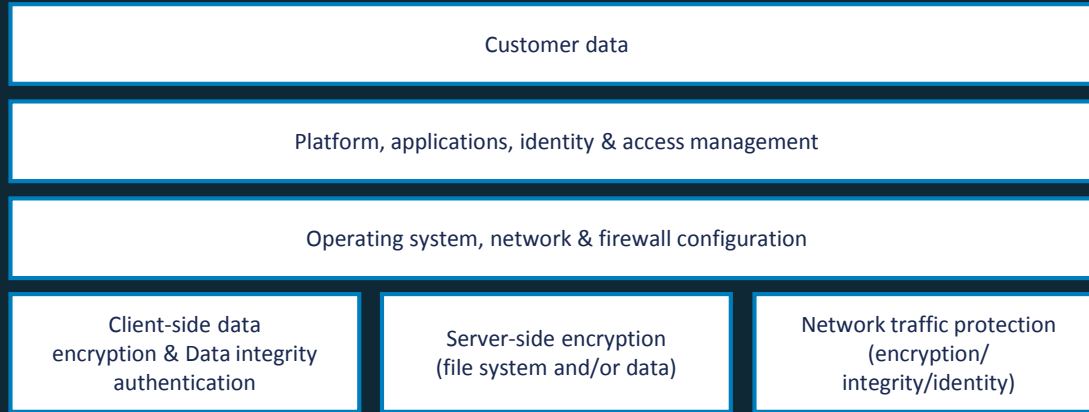
“CIOs and CISOs need to stop obsessing over unsubstantiated cloud security worries, and instead apply their imagination and energy to developing new approaches to cloud control, allowing them to securely, compliantly, and reliably leverage the benefits of this increasingly ubiquitous computing model.”

Source [Clouds Are Secure: Are You Using Them Securely?](#)

# Security & Compliance is a shared responsibility

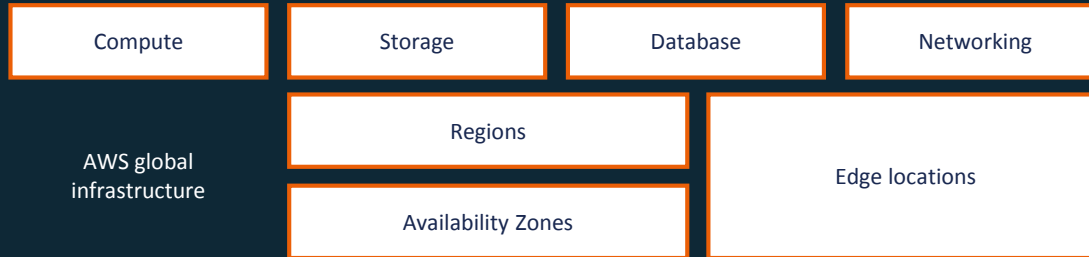
## Customer

Responsible  
for security  
**IN** the cloud



## AWS

Responsible  
for security  
**OF** the cloud



# AWS security solutions



## Identity

AWS Identity & Access Management (IAM)  
AWS Organizations  
AWS Cognito  
AWS Directory Service  
AWS Single Sign-On



## Detective control

AWS CloudTrail  
AWS Config  
Amazon CloudWatch  
Amazon GuardDuty  
VPC Flow Logs



## Infrastructure security

Amazon EC2 Systems Manager  
AWS Shield  
AWS Web Application Firewall (WAF)  
Amazon Inspector  
Amazon Virtual Private Cloud (VPC)



## Data protection

AWS Key Management Service (KMS)  
AWS CloudHSM  
Amazon Macie  
Certificate Manager  
Server Side Encryption



## Incident response

AWS Config Rules  
AWS Lambda

# Move to AWS

## Strengthen your security posture



**Inherit  
global  
security and  
compliance  
controls**



**Scale with superior  
visibility and  
control**



**Highest  
standards  
for privacy  
and data  
security**



**Automate  
with deeply  
integrated  
security services**



**Largest  
network  
of security  
partners and solutions**

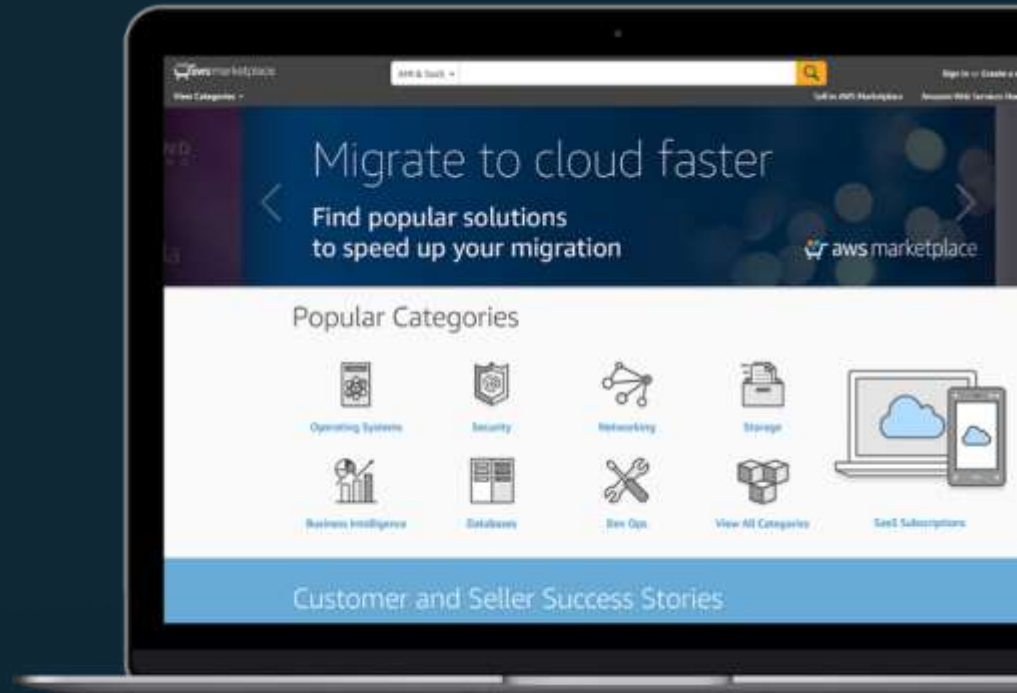
# Inherit global security and compliance controls



# AWS Marketplace: Find, buy, deploy and managed software in the cloud

## ABOUT AWS MARKETPLACE

- Deploy software on demand
- 1,280+ ISVs
- 4,200+ product listings
- Simplified procurement and deployment
- Billed through AWS account
- Deployed in 15 regions around the world
- 160,000 active customers
- 481M EC2 hours deployed per month





# Cloud-First & Automated Security by Design

Establishment of Engineering Heuristics - rules you won't break

## CLOUD - FIRST

- The cloud is not just another data center with virtual machines
- Leverage managed services
- For every problem, ask: how do we best solve this in the cloud using current best practices?
- Let modern tools solve old hard problems

## AUTOMATE EVERYTHING

- Build everything as Infrastructure as Code
- Do not log in to the console and make changes
- Never log in to a server

## SECURITY BY DESIGN

- Secure every part all the time
- Apply the principle of Least Privilege

Before...

Move fast

OR

Stay secure

Now...

Move fast

**AND**

Stay secure

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