





# **Cloud battles: Choosing Azure, AWS or Google battleships**

Viktorija Almazova  
Cloudworks



Google Cloud



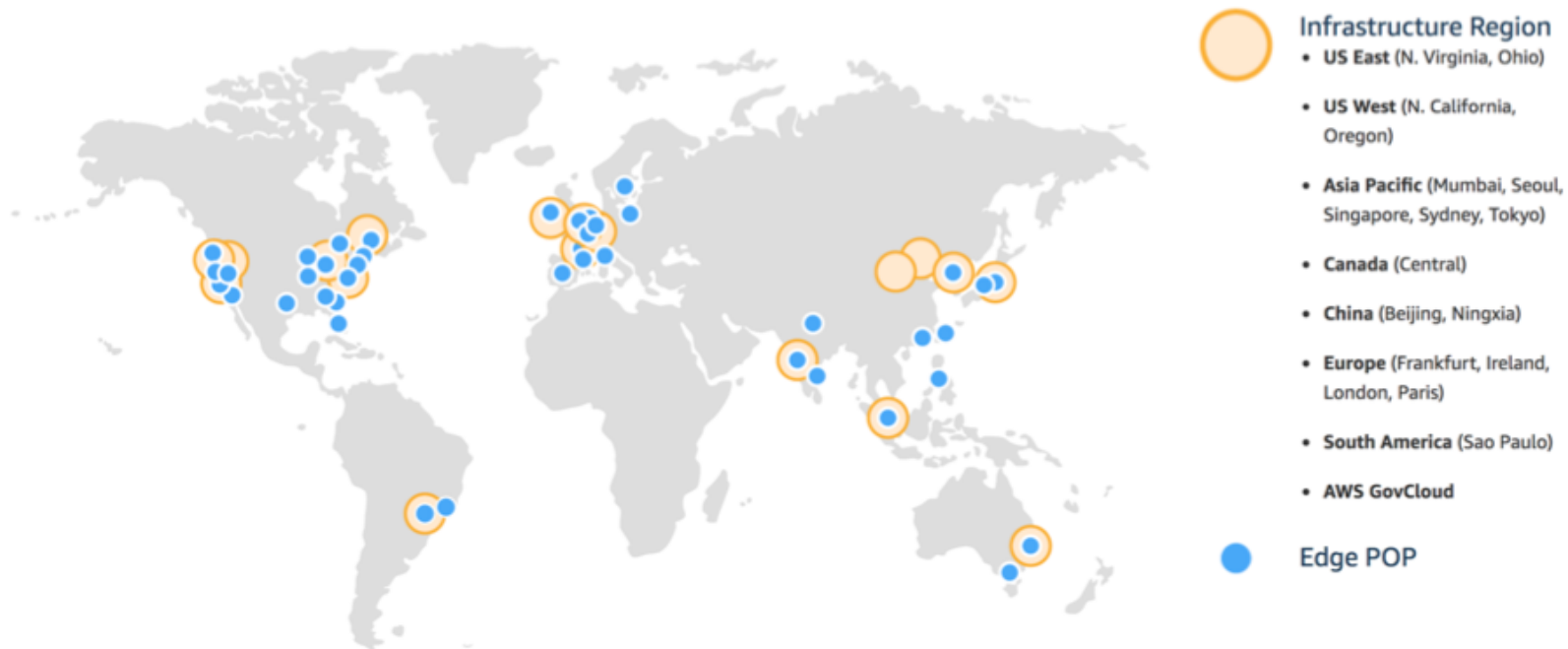
**NIC**



- 2006
- AWS invented Cloud market
- Started with EC2 and S3
- by 2009 it was mostly used by startups
- As IaaS starter

Netflix, Airbnb, BMW, Spotify, British Gas, Dow Jones, Kellogg's

## Global Network of Regions and Edge Locations





- Amazon's biggest strength is its dominance of the public cloud market
- Amazon's infrastructure is enormous
- AWS has a huge and growing array of available services



Pixar, Maersk, Hershey, Boeing

- 2010
- Started as PaaS
- Choice for Corporates
- Hybrid connection
- MS products

## 42 Azure regions, more than any cloud provider







- Microsoft is frequently chosen as a strategic cloud provider by customers that are committed to Microsoft technologies
- support for hybrid cloud environments, including its Azure Stack software
- embrace of Linux and other open source technologies has also helped attract some enterprises



GANT, Lush, HSBS, M&S

- 2008
- Started with Google App Engine
- Different approach comparing with AWS and Azure



\* While some regions may launch with 2 zones, all regions are planned for a minimum of 3 zones.



- GCP is most attractive to cloud-native companies and those that want to 'run like Google.'
- It has a strong offering in containers, since Google developed the Kubernetes standard that AWS and Azure now offer
- GCP specializes in high compute offerings like Big Data, analytics and machine learning

# Compute



EC2  
EC2 Auto Scaling  
Elastic Container Service  
EKS  
Elastic Container Registry  
Lightsail  
Batch  
Elastic Beanstalk  
Fargate  
Lambda  
Serverless Application  
Repository  
VMware Cloud



Virtual Machines  
Virtual Machine Scale Sets  
App Service  
Functions  
Azure Container Service  
Container Instances  
Container Registry  
Service Fabric  
App Service  
Batch



Compute Engines  
Kubernetes  
App Engine  
Cloud Functions

**NIC**

# Storage



S3  
EBS  
Elastic File System  
Glacier  
Storage Gateway  
Snowball  
Snowball Edge  
Snowmobile



Storage  
Blob Storage  
Archive Storage  
Queue Storage  
File Storage  
Disk Storage  
Data Lake Storage  
StorSimple  
Backup  
Site Recovery



Cloud Storage  
Persistent Disk  
Google Transfer Appliance  
Cloud Storage Transfer  
Service  
BigQuery Data Transfer  
Service

**NIC**

# Database



Aurora  
RDS  
DynamoDB  
ElastiCache  
Redshift  
Neptune  
DB Migration Service



SQL Database  
Database for MySQL  
Database for PostgreSQL  
SQL Data Warehouse  
SQL Server Stretch  
Database  
Cosmos DB  
Redis Cache  
Azure Database Migration  
Service



Cloud SQL  
Cloud BigTable  
Cloud Spanner  
Cloud Datastore

**NIC**

# Networking



Amazon VPC  
Amazon CloudFront  
Amazon Route 53  
Amazon API Gateway  
Elastic Load Balancing  
AWS Direct Connect



Virtual Network  
Content Delivery Network  
Azure DNS  
Application Gateway  
VPN Gateway  
Load Balancer  
Traffic Manager  
ExpressRoute  
Network Watcher



VPC  
Cloud Load Balancing  
Cloud CDN  
Cloud DNS  
Cloud Interconnect  
Network Service Tiers

**NIC**





IAM  
Organizations  
SSO  
Cloud Directory  
Directory Service  
Cognito  
GuardDuty  
Inspector  
Macie  
Certificate Manager  
CloudHSM  
Key Management Service  
Shield  
WAF



AAD  
AAD Identity Protection  
AAD B2C  
AAD Domain Services  
Application Proxy  
Security Center  
Key Vault  
Azure DDoS Protection



Cloud IAM  
Cloud Identity Aware  
Proxy  
Cloud Data Loss  
Prevention API  
Security Key Enforcement  
Cloud Key Management  
Service  
Cloud Security Scanner

# Management Tools



CloudWatch  
CloudTrail  
Config  
OpsWorks  
Personal Health Dashboard  
System Manager  
Trusted Advisor



Azure Advisor  
Application Insights  
Log Analytics  
Azure Monitor  
Network Watcher



Google Stackdriver  
Monitoring  
Logging  
Error reporting  
Trace  
Debugger  
Cloud Management



SageMaker  
Comprehend  
Lex  
Polly  
Rekognition  
Machine Learning  
Translate  
Transcribe  
DeepLens  
Deep Learning AMIs  
Apache MXNet  
TensorFlow



Machine Learning Services  
Machine Learning Studio  
Azure Bot Service  
Cognitive Service  
Computer Vision API  
Face API  
Content Moderator  
Emotion API  
Video Indexer  
Various Speeches API  
LUIS  
Text Analytics API  
Translator Text API  
Recommendations API  
Bing APIs  
Microsoft Genomics



Cloud AutoML  
Cloud ML Engine  
DialogFlow Enterprise  
Cloud Natural Language  
Cloud Speech API  
Cloud Translation API  
Cloud Vision API  
Cloud Video Intelligence



Console  
CLI  
CloudFormation  
API

CodeStar  
CodeDeploy  
X-Ray  
CodeCommit  
CodePipeline  
CodeBuild  
Cloud9



Azure portal  
Cli  
Cloud Shell  
Azure Resource Manager  
API

VSTS  
Visual Studio App Center  
Azure DevTest Labs  
App Insights



Cloud Console  
Cloud Shell  
API

Container Registry  
Container Builder  
Cloud Source Repositories  
Cloud Tools for IntelliJ  
Cloud Test Lab

# Various



MQ/SQS  
WorkSpaces  
AppStream 2.0

IoT Core  
FreeRTOS  
Greengrass  
IoT Device Management

GameLift  
Lumberyard



Logic Apps  
Notification Hubs  
Event Hubs

IoT Hub  
IoT Edge



BigQuery  
Cloud Dataflow  
DataProc  
Datalab  
Dataprep  
Genomics

Cloud IoT Core

**NIC**

# Cloud pricing

- Prices go down
- Discounting options increase
- Per second billing





Google Cloud

# What to choose?



**NIC**

# Resources

Slides and demos from the conference will be available at  
[github.com/nordicinfrastructureconference/2018](https://github.com/nordicinfrastructureconference/2018) ([bit.ly/2y7JhA3](https://bit.ly/2y7JhA3))