



Introduction to Cloud Computing

Using Amazon Web Services (AWS)





ABOUT ME

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Cloud
Ambassador



- Bergen, Norway 🇳🇴
- Cloud Consultant @ TietoEVRY
- Student @ Noroff University College
- AWS Certified Solutions Architect
- 30 Years old, 2 Kids
- ❤️ DevOps
- Developer, Photographer, Aviation Geek ✈️

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kmoberg

What is Cloud Computing?



Source: <https://bit.ly/visiblecloud>



"Due to less Pollution, the files stored on cloud are now Clearly Visible. 😊"

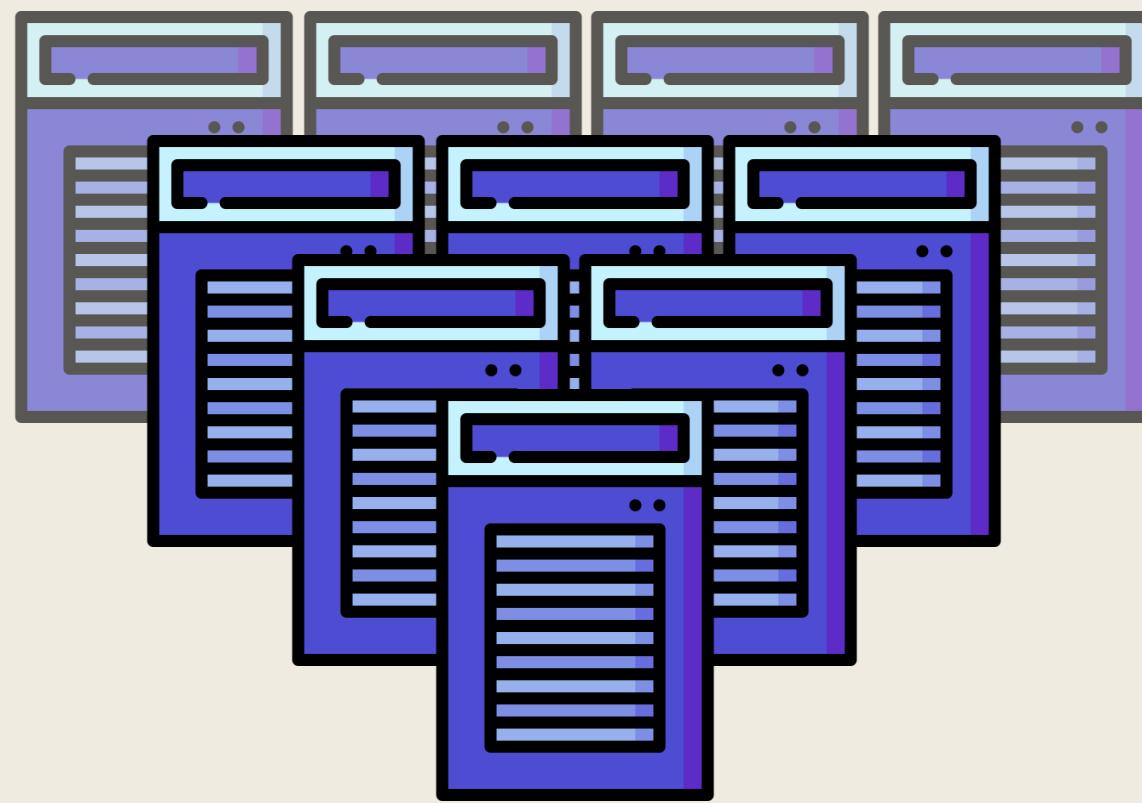
@Shah_Rizvi97, 2020.05.05

A photograph of two people in a server room. A man in a blue shirt is seated at a white circular table, looking at a laptop screen displaying a terminal window. A woman in a light green polo shirt stands behind him, also looking at the screen. They are surrounded by tall server racks with Dell logos and many blue cables. The room has a purple and blue color palette from the lighting.

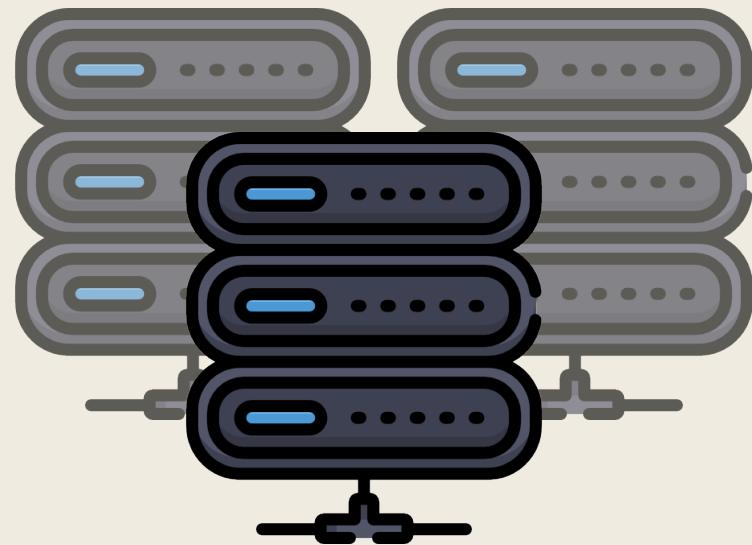
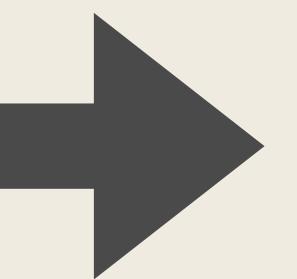
“There is no cloud, it’s just
someone else’s computer”

- The internet

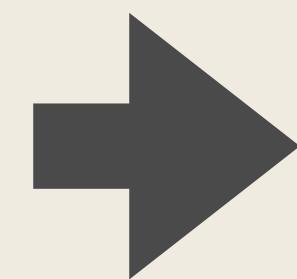
What?



Traditional Business
Servers



Virtualized Environment



Cloud



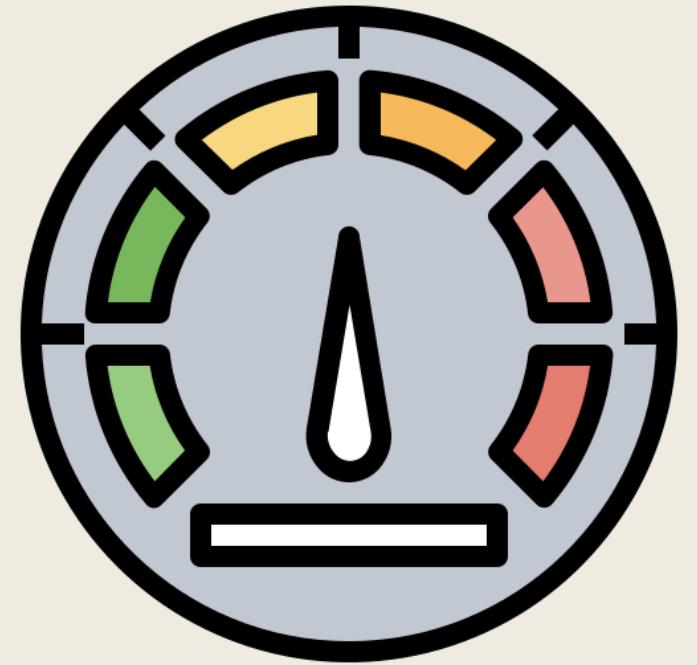
“Our move to the cloud costs *how much per month??*”

- Executives after they see their cloud bill, a month after lifting 100 servers to the cloud

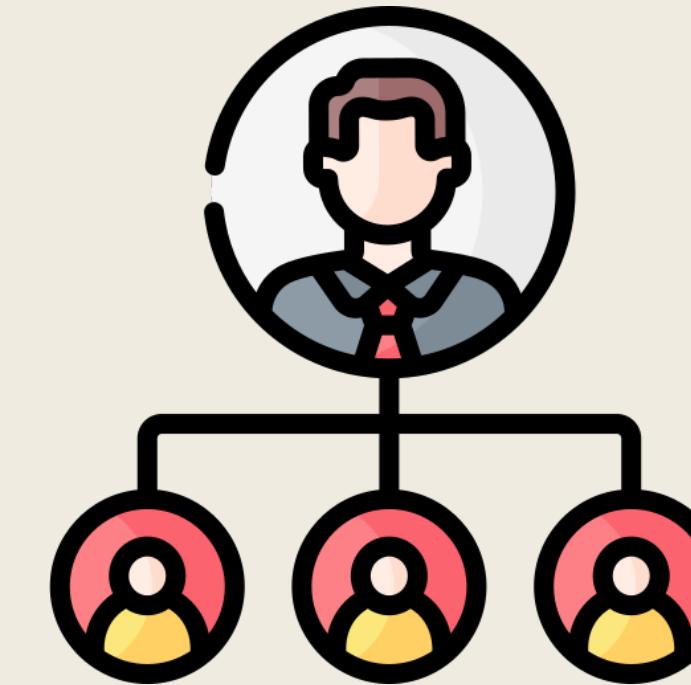
Why?



Elasticity

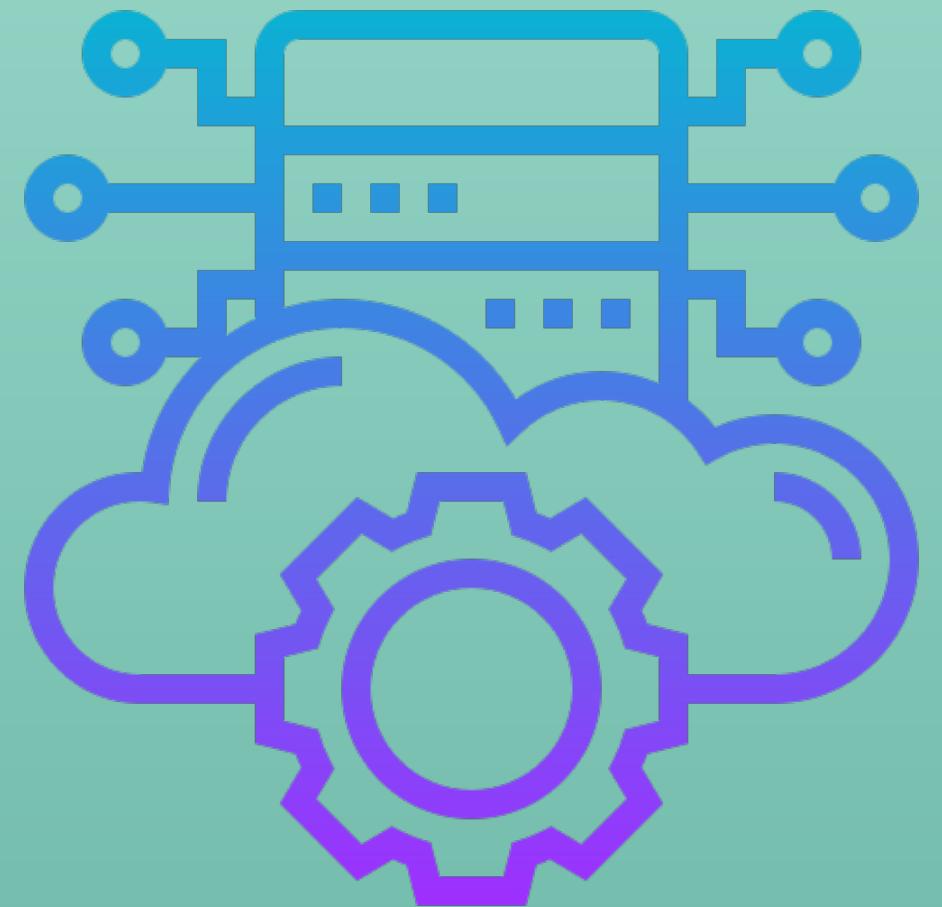


Efficiency



Strategic Value

What is Cloud Computing?



Acronym-Extravaganza

Types of Cloud Services

- IaaS - *Infrastructure as a Service*
Technical infrastructure maintained by provider, such as Networking, Physical Machines, Power, etc.
- PaaS - *Platform as a Service*
Focus on the code and not about the server, operating system and storage.
- SaaS - *Software as a Service*
Complete software packages, run and maintained by provider.
- XaaS - <You Name It> as a Service
Backup as a service? Sure! 🍕aaS? Why not?



Deployment



Private Cloud



Hybrid Cloud



Public Cloud

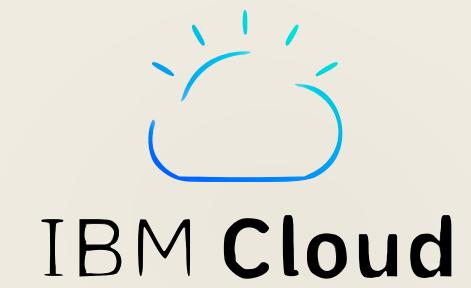


Amazon Web Services

Cloud Providers



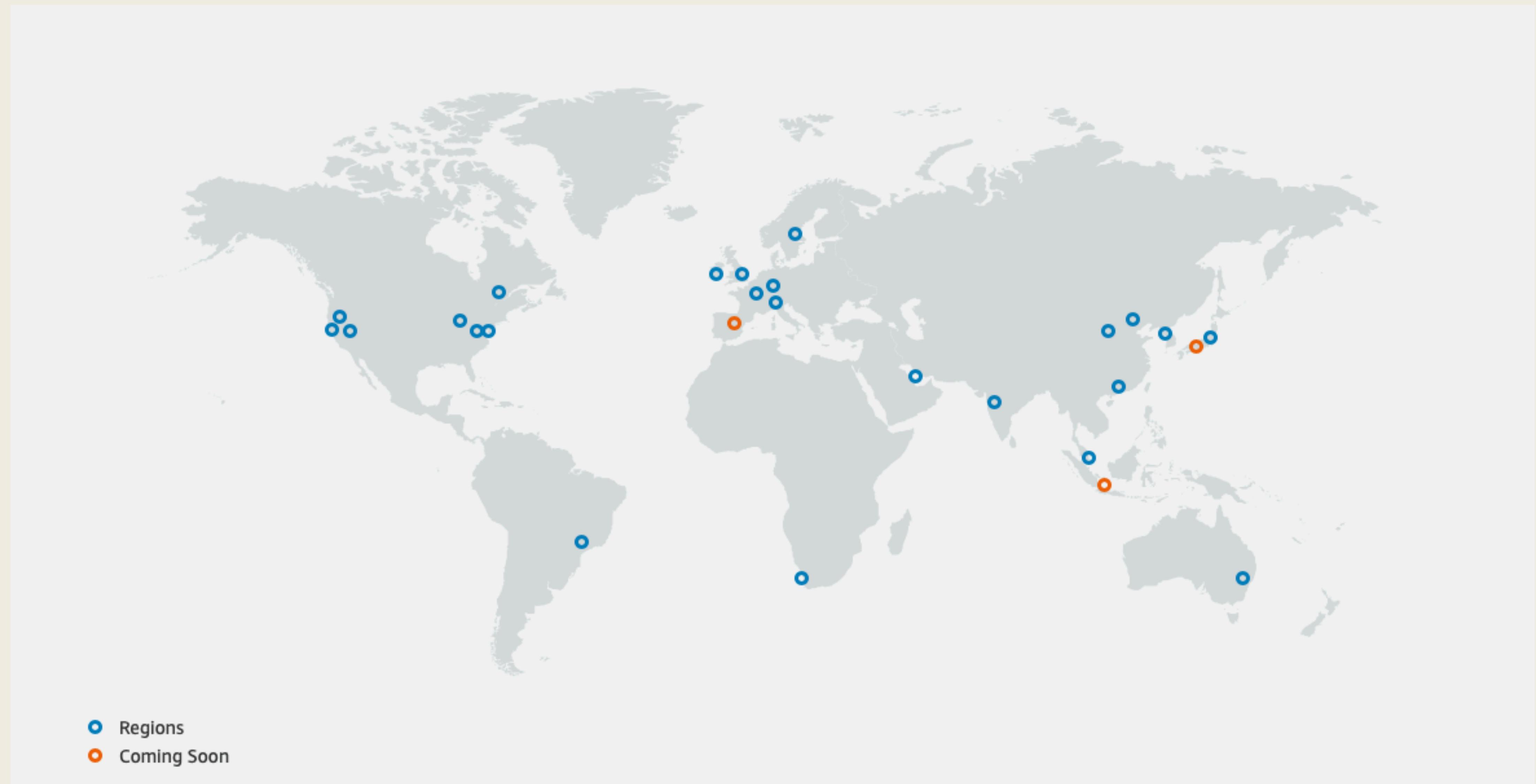
Google Cloud



32.4%

AWS Q4 2019 Marketshare

Source: Canalys Cloud Channel Analysis, January 2020



AWS Regions

Accurate per 2020.05.30

AWS Services



Amazon S3

Simple Storage Service

Object Storage

Unlimited Storage

99.99999999% Durability



"Buckets"

3 Storage Classes

S3 Replication

Simple Website Hosting

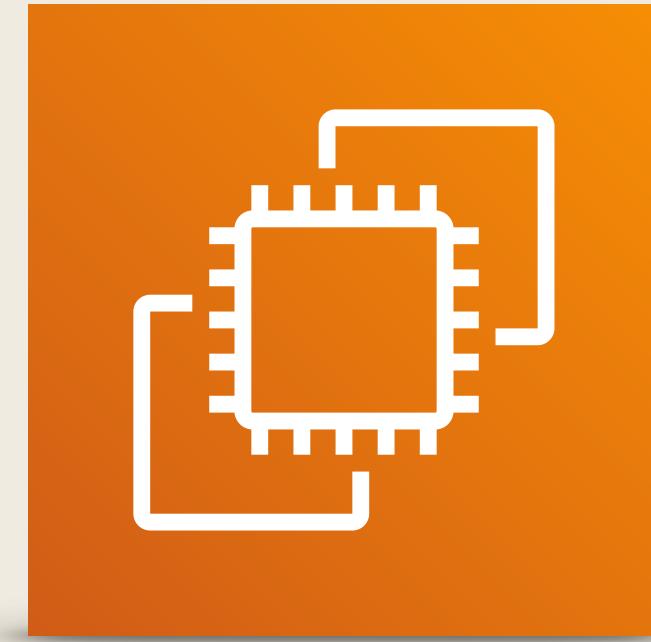
EC2

Amazon Elastic Compute Cloud

Virtual Machines

Placed in an AZ

Vertical and Horizontal Scaling



4 Pricing Models

AMIs

Private or publicly available

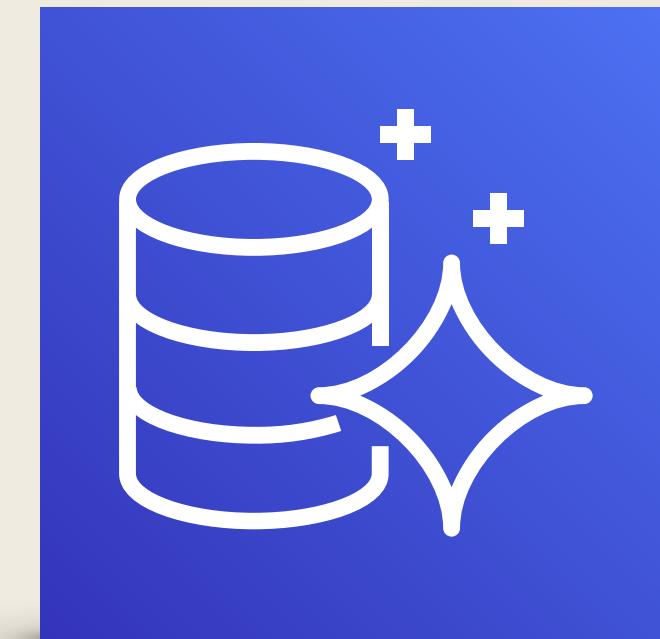
Amazon Aurora

Managed Relational Database

MySQL & Postgres Compatible

Five times faster than MySQL

Distributed, fault-tolerant



Instant Replication across 3-AZs

Up to 15 read replicas

Fully Managed

AWS Lambda

Run Code without managing servers

Serverless Compute

Pay only for compute time

Continuous Scaling



Subsecond Metering

Multiple language support

Up to 15 minutes per execution

AWS Free Tier



CLOUD COMPUTING - AMAZON WEB SERVICES

Free Stuff!

“What’s in it for me?”

- EC2
- S3
- Elastic Beanstalk
- OpsWorks
- CodeStar
- Auto-Scaling
- Many, many more

Free AWS Service

Always Free

Free Tier

750 Hours

Amazon EC2, Per Month

750 Hours

Amazon RDS, Per Month

5 GB

Amazon S3, Per Month

1Million

Amazon Lamdba Requests, Per Month



Questions?