Getting Started with AWS

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Introduction to AWS

What is AWS?

- AWS stands for **Amazon Web Services.**

- Amazon Web Services (AWS) is the world's most comprehensive and broadly adopted **Cloud Platform.**

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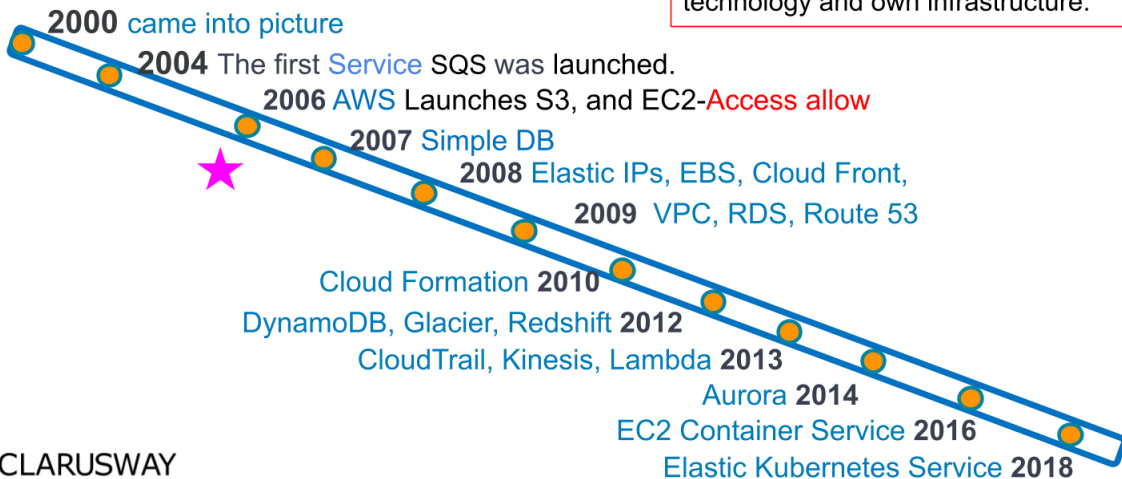WAY TO REINVENT YOURSELF

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Introduction to AWS
What is AWS?

| IAM | S3 | EC2 | Cloudformation | Elastic Beanstalk |

- AWS provides **on-demand** delivery of **technology services** via internet**.**

- It offers **over 200** fully featured services.

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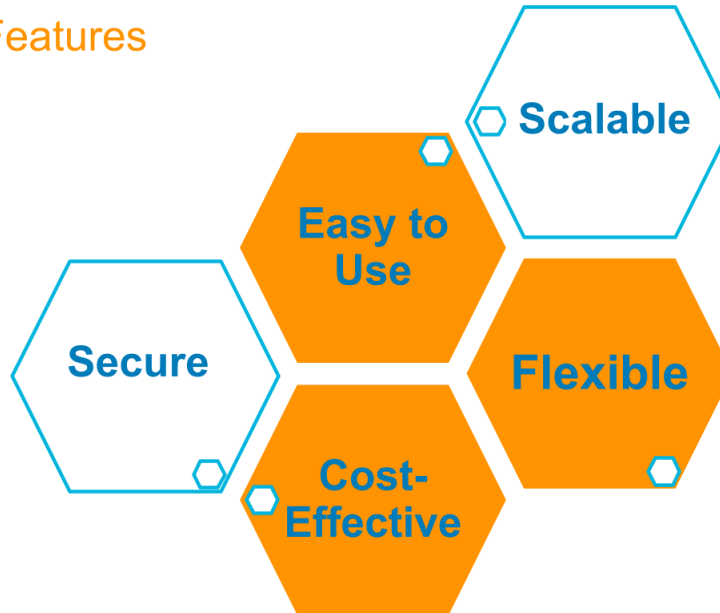WAY TO REINVENT YOURSELF

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Introduction to AWS
History of AWS

AWS launched its first service in 2004. Over the years, many new services were put into service. But in this diagram, the real breaking point started in 2006, when AWS allowed developer begin to access to Amazon's own back-end technology and own infrastructure.

2000 came into picture

2004 The first Service SQS was launched.

2006 AWS Launches S3, and EC2-Access allow

2007 Simple DB

2008 Elastic IPs, EBS, Cloud Front,

2009 VPC, RDS, Route 53

Cloud Formation **2010**

DynamoDB, Glacier, Redshift **2012**

CloudTrail, Kinesis, Lambda **2013**

Aurora **2014**

EC2 Container Service **2016**

Elastic Kubernetes Service **2018**

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Introduction to AWS
AWS Features

Scalable

Easy to Use

Secure

Flexible

Cost-Effective

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Introduction to AWS
AWS Market Share

AWS 32.4%

Azure 17.6%,

Google Cloud 6%,

Alibaba Cloud 5.4%

Others 38.5%.

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Introduction to AWS
AWS Pros

- Many featured services and largest global infrastructure.

- Most comprehensive and broadly adopted provider.

- Pay-as-you-go.

- High availability and scalability.

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Introduction to AWS
AWS Cons

- Complex service functionalities can be a challenge for beginners.
- Billing can be confusing.
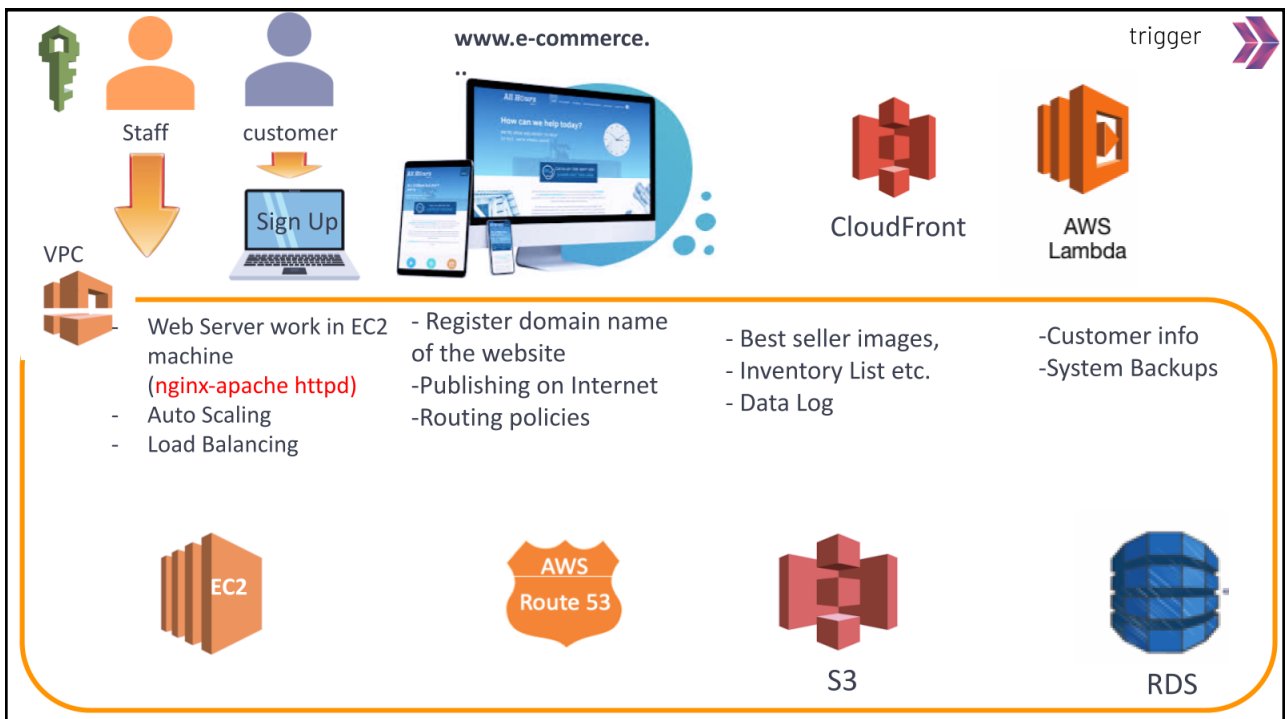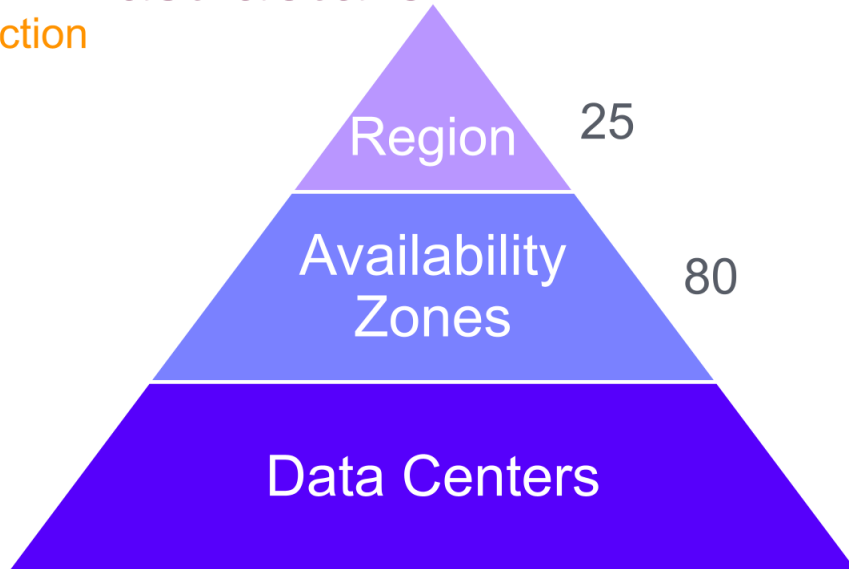- Can be costly in comparison to others.

There is no cloud
it's just someone else's computer

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What does AWS offer?
AWS Services

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www.e-commerce...

trigger

Staff   customer

Sign Up

VPC

CloudFront   AWS Lambda

- Web Server work in EC2 machine
  (nginx-apache httpd)
- Auto Scaling
- Load Balancing

- Register domain name of the website
- Publishing on Internet
- Routing policies

- Best seller images,
- Inventory List etc.
- Data Log

- Customer info
- System Backups

EC2   AWS Route 53   S3   RDS

AWS Infrastructure
Introduction

Region   25

Availability Zones   80

Data Centers

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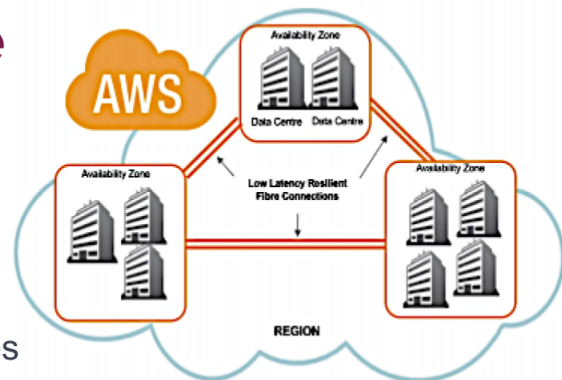
AWS Infrastructure
Introduction

AWS

REGION

- AWS Regions and Availability Zones

- Multiple Availability Zones in AWS Region

- Availability Zones consist of one or more discrete Data Centers

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AWS Infrastructure
AWS Regions

25 Geographic Regions

N. Virginia is the region with the most service-support. In the other regions, not all services of AWS are in progress.

○ Current Regions
○ New Regions coming soon

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AWS Infrastructure
AWS Availability Zones

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AWS Infrastructure
AWS Availability Zones

- An Availability Zone is a facility where the data centers are located.

- There are currently 80 Availability Zones (as of Mar 2021).

- All AZ's in an AWS region are interconnected with metro fiber.

- All traffic between AZ's is encrypted.

- AZ's are physically separated by a meaningful distance, many kilometers, from any other az, although all are within 100 km (60 miles of each other).

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AWS Infrastructure
AWS Data Centers

- The data center infrastructure consists of **physical or hardware-based tools and components.**
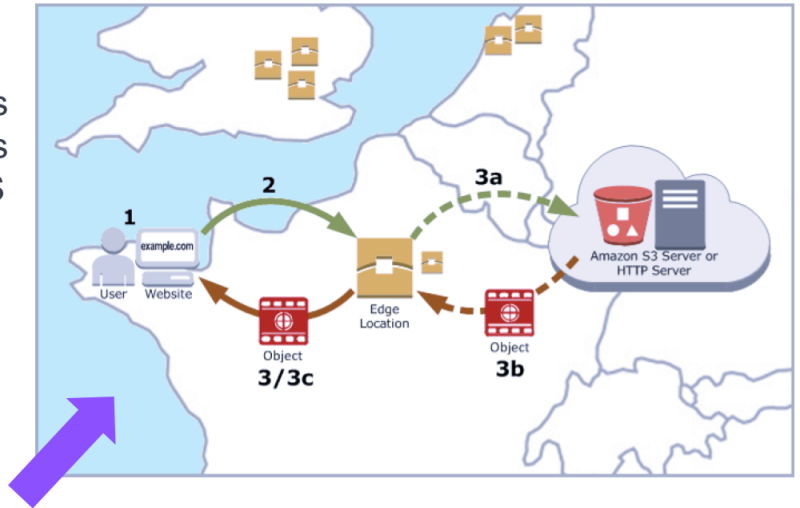
- AWS data centers are **secure** by design.

Northern Virginia Data Center

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AWS Infrastructure
Edge Locations

- An edge location is where end-users access services located at AWS and used for **caching content.**

- **215+** Edge Locations

First Query : 1-2-3a-3b-3c-1

Second Query : 1-2-3-1

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AWS Infrastructure
AWS Local Zones

- AWS Local Zones are a new type of AWS infrastructure deployment that places AWS compute, storage, database, and other select services closer to large population, industry, and IT centers **where no AWS Region exists today.**

- Each AWS Local Zone location is an **extension of an AWS Region**

- AWS Local Zones is now available in **Los Angeles.**

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AWS Free Tier
What is AWS Free Tier?
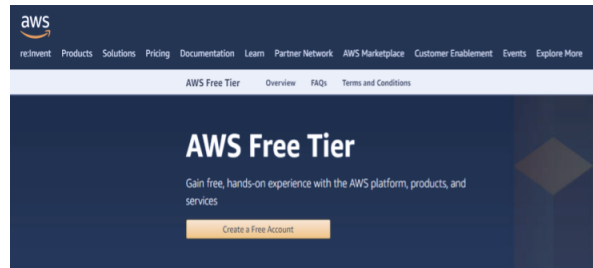
- The AWS free tier is a account type that lets you gain free, hands-on experience with AWS products and services.

- The AWS free tier provides customers the ability to explore and try out AWS services free of charge up to specified limits for each service.

AWS Free Tier
Free Tier Offer Types

The Free Tier is comprised of three different types of offerings;

- Services with a **12-month free tier** allow customers to use the product for free up to specified limits for one year from the date the account was created.

- Services with an **always free** offer allow customers to use the product for free up to specified limits as long as they are an aws customer.

- Services with a **short term trial** are free to use for a specified period of time or up to a one-time limit depending on the service selected.

AWS Free Tier
Billing Policy

- You are recommended to set **a billing alarm** to stay within the limits.

- If your application use exceeds the free tier limits, you simply pay standard, **pay-as-you-go service rates.**

- AWS Free Tier is applied to your **monthly usage**. It will expire on the 1st day of each month and does not accumulate.

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