Getting started with AWS

History

Launched internally in Amazon, then they realize they can provide these services to other company as a service, so they launched SQS as their first product. Then they relaunched AWS cloud with SQS, S3 & EC2.

Then they launched in Europe after only launching in US.

AWS is on the front of pioneering the cloud services, and they occupy the largest market share, so learning AWS is useful!

You can build pretty build anything on AWS. Applicable to diverse set industries. You can use it as backup storage, big data analytics, website hosting, or even host gaming servers.

AWS global infrastructure

AWS is a global service, meaning it is available world wide. AWS service are separated into regions and availability zones spread world-wide.

AWS regions are geographical locations with a collection of availability zones being mapped to a physical data center. Each have their own power, water supply, etc. If one region fails then other region will not be impacted.

~~Within each region it contains at least two availability zones which is the actual physical data center, each zone doesn't necessarily mean it is backed by exactly one physical data center, each zone might be backed by one or more physical data center. Each zone in a region also have redundant and separate power, networking to prevent the likelihood of two zones failing simultaneously.~~ **~~Hence, data for each region are replicated within each availability zone.~~**

Basically, AWS divide up the service places into regions, which are collection of availability zones. Each region contain multiple availability zones to have redundancy. Regions exist so that they operate independent of each different regions.

How do you choose an AWS Region?

If you need to launch a new application, where should you do it? It will depend on several factors

1. **Compliance** with data governance and legal requirements: data never leaves a region without your explicit permission. Sometimes the government want data in France to stay

in France and not leave to be somewhere else.
2. **Proximity** to customers: In order to reduce latency.
3. **Available services** within a region: Not all regions will have all of the services available. When you are deploying you have to make sure that the region you are deploying to have that service that you want to deploy
4. **Pricing**: Pricing varies region from region. More expensive service in more obscure region

AWS Availability zones

Minimum is 3, maximum is 6.

For example, we have region **ap-southeast-2**

Then for availability zone we have **ap-southeast-2a, ap-southeast-2b, ap-southeast-2c**

Again each of the availability zone might be backing up one more more data centers. They each have their own supply and networking as well. So we have isolation within a region as well.

Each availability zone are connected together with high width, low latency networking in order to form the **region**.

AWS points of presencen

Have 216 points of presence.

Content is delivered to end users with lower latency.

AWS console

Some services will have global as their region. This means it is available world-wide you do not need to pick a region.

Services such as Route 53 which is available world-wide meaning it will not be impacted which region you are at, you can utilize Route 53 no matter which region you are picking.

Revision #2
Created 2023-02-06 18:26:07 UTC by Tamarine
Updated 2023-02-06 20:32:00 UTC by Tamarine