Each region is isolated with other region

Any data stored in any region never leaves the region unless you explicity with the right credentials & permissions, request the data be exported

There are 4 business factors for choosing a region

1. compliance:
2. proximity
   latency - the time takes for data to be sent & recieved.
3. feature availability: sometimes closest region may not have all the aws features you want.

-> Every year aws releases thousands of new features and products specifically for customers requests & needs

4. Pricing: some locations are just more expensive to operate
   Example: Brazil tax structure is such that it costs aws significantly more to operate the exact same services there in many other countries
   -) Each region has different price sheet

=> Run atleast 2 availability zones in a Region

Edge locations: An edge location is a site that amazon cloudfront uses to store cached copies of your content closer to your customers for faster delivery.

If you have customers in mumbai, who need access to your data, but the data is hosted out of the Tokyo Region, rather than having all the mumbai based customers send request to tokyo, to access data. Just place a copy locally & cache a copy in mumbai

Caching copies of data ~~apex~~ ~~the~~ ~~is~~ Content delivery network

CDNs

→ CDN used on Amazon is called as ~~coat~~ Amazon cloudfront.

Amazon cloud front - It is a service that helps deliver data to customers around the world with low latency and high transfer speeds

→ Amazon cloud front uses edge locations to help to accelerate communication with users

→ Edge locations are diff from regions

→ Edge Locations run DNS (Domain Name system) known as Amazon Route 53 ; helps customers by directing to correct web locations with reliably low latency

AWS Outposts :

key points : ① Regions are geographically isolated areas - where you can access services needed to run your enterprise

② Region contain Availability zone :: allows u to run across physically separated buildings , 10s of miles of separation

③ Edge locations run ~~Amazon~~ cloud front

How to provision AWS resources

We can use these resources (AWS) with API's

Everything is an API call in AWS

- API - Application programming interface. We can invoke & call these API's

→ For creating different requests & different API calls to AWS. you can use,
- AWS Management Console
- AWS Command line interface (CLI)
- AWS Software Development kits (SDKs) & various other tools

AWS Management Console: It is browser based. And also useful for building test environments & viewing AWS bills, viewing monitoring & working with non-technical resources

CLI: Make API calls using the terminal on your machine

SDKs: Interacts with AWS resources through various programming languages

AWS (CLI): U can use AWS command line interface (AWS CLI) to save time when making API requests. AWS CLI enables U to control multiple AWS services directly from command line to within one tool.

- There are also other ways to management AWS environment using managed tools likes AWS Elastic Beanstalk & AWS cloud Formation

AWS Elastic Beanstalk: Helps you provision Amazon EC2-based environments