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## Day 1 of the 100-days Challenge :-

AWS Cloud Overview and Regions AZ

### What is AWS !

AWS (Amazon web services) is a cloud provider

They provide you with servers and services that you can use on-demand and scale easily

AWS powers some of the biggest websites in the world.

Amazon.com

Netflix

### AWS Cloud Use Cases!

- AWS enables you to build sophisticated, scalable applications
  - Applicable to a diverse set of industries
  - Use cases include
    - Enterprise IT, Backup & Storage, Big Data Analytics
    - Website hosting, Mobile & Social Apps
    - Gaming.





## AWS Global Infrastructure!

### AWS Regions

- AWS Availability Zones
- AWS Data Centers
- AWS Edge Locations / Points of Presence.

# AWS Global Infrastructure

The most secure, extensive, and reliable Global Cloud infrastructure, for all your applications

Create an Account

## 31 Launched Regions

each with multiple Availability Zones (AZs)

## 99 Availability Zones

## 410+ Points of Presence

400+ Edge Locations and 13 Regional Edge Caches

### AWS Global Infrastructure Map

The AWS Cloud spans 99 Availability Zones within 31 geographic regions around the world, with announced plans for 15 more Availability Zones and 5 more AWS Regions in Canada, Israel, Malaysia, New Zealand, and Thailand.



List view

Regions Coming soon

**32 Local Zones**  
**29 Wavelength Zones**  
for ultralow latency applications

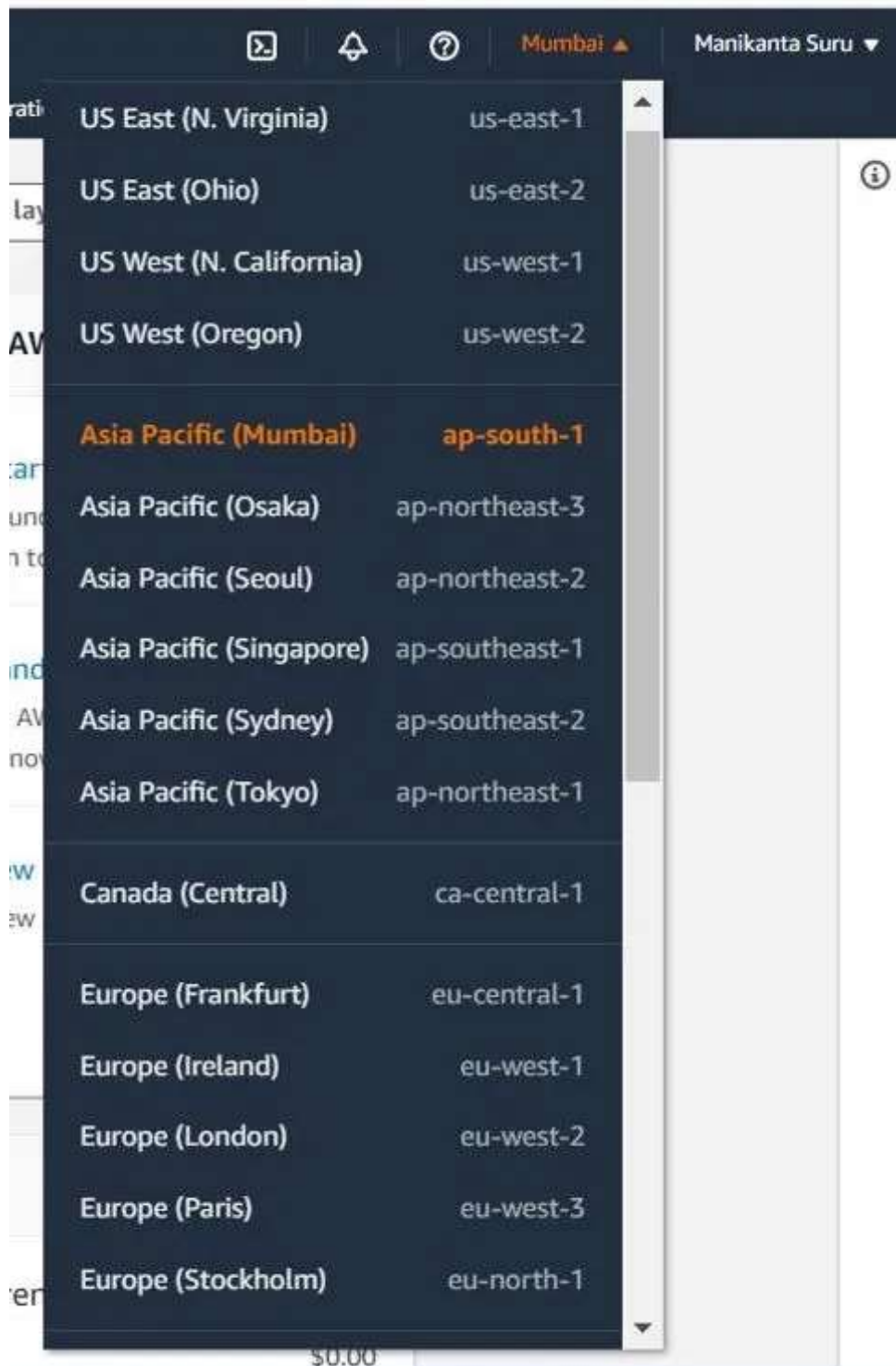
**245 Countries and Territories Served**

**115 Direct Connect Locations**

<https://aws.amazon.com/about-aws/global-infrastructure/?p=ngi&loc=1>

## AWS Regions!

- AWS has Regions all around the world
- Names can be us-east-1, eu-west-3...
- A region is a cluster of data centers
- Most AWS services are region-scoped



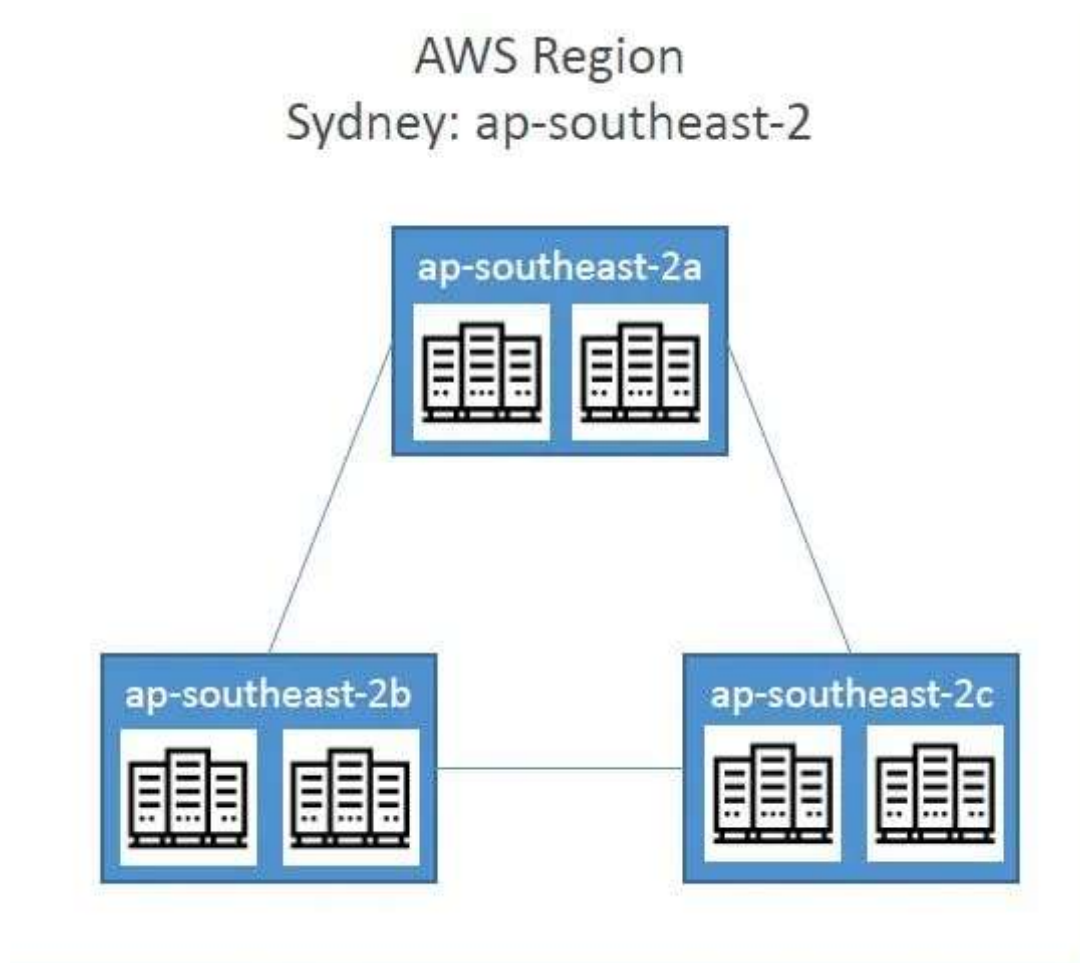
## How to choose an AWS Region!

- Compliance with data governance and legal requirements: data never leaves a region without your explicit permission
  - Proximity to customers: reduced latency
  - Available services within a Region: new services and new features aren't available in every Region
  - Pricing: pricing varies from region to region and is transparent in the service pricing page

## AWS Availability Zones!

Each region has many availability zones (usually 3, min is 3, max is 6). Example:

- ap-southeast-2a
- ap-southeast-2b
- ap-southeast-2c
- Each availability zone (AZ) is one or more discrete data centers with redundant power, networking, and connectivity
- They're separate from each other, so that they're isolated from disasters
- They're connected with high bandwidth, ultra-low latency networking



## AWS Points of Presence (Edge Locations)

- Amazon has 216 Points of Presence (205 Edge Locations & 11 Regional Caches) in 84 cities across 42 countries

- Content is delivered to end users with lower latency.

[Amazon CloudFront](#) [Overview](#) [Features](#) [Pricing](#) [Getting Started](#) [Resources](#) [Media](#) [Customers](#) [Partners](#)

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## Amazon CloudFront Key Features

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[Global edge network](#)

[Security](#)

[Availability](#)

[Edge computing](#)

[Real-time metrics and logging](#)

[DevOps friendly](#)

[Continuous deployment](#)

[Cost effective](#)

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### Global Edge Network

Reliable, low latency and high throughput network connectivity

#### Network Connectivity and Backbone

Amazon CloudFront peers with thousands of Tier 1/2/3 telecom carriers globally, is well connected with all major access networks for optimal performance, and has hundreds of terabits of deployed capacity. CloudFront edge locations are connected to the AWS Regions through the AWS network backbone - fully redundant, multiple 100GbE parallel fiber that circles the globe and links with tens of thousands of networks for improved origin fetches and dynamic content acceleration.

To deliver content to end users with lower latency, Amazon CloudFront uses a global network of 450+ Points of Presence and 13 regional edge caches in 90+ cities across 48 countries. Amazon CloudFront Edge locations are located in:



North America

Edge locations: Washington, DC (11); Chicago, IL (19); New York, NY (10); Atlanta, GA (10); Los Angeles, CA (9); Miami, FL (11); Dallas-Fort

<https://aws.amazon.com/cloudfront/features/>

That's it, thank you for reading.

👉 In case you would like to continue the discussion, you can always reach out to me on [Twitter](#) or on LinkedIn for professional networking, if you feel like following me on [GitHub](#) you can also do that.

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