



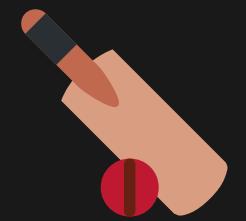
Introduction to the Cloud Computing



Hello,

I'm Vithushan Logeswaran

DevOps | Lead Lecturer



Connect With Me



A screenshot of a LinkedIn profile for Vithushan Logeswaran. The profile picture shows a man with dark hair and a beard in a blue suit. The headline reads "Relax with a cup of coffee". Below the profile picture is a large image of a hand holding a black coffee cup. The main section of the profile includes the name "Vithushan Logeswaran", the title "DevOps 🤖 | AWS☁️ | Docker & K8s 🚀 | Entrepreneur 🚀 | TechMentor", and a graph icon. It also lists "Vavuniya District, Northern Province, Sri Lanka" and "Contact info". A red circle highlights the email address "vithushan.work@gmail.com" which is listed under "500+ connections". At the bottom, there is a message box with the text "Hi, Vithushan!" and a small profile picture.

Vithushan Logeswaran
DevOps 🤖 | AWS☁️ | Docker & K8s 🚀 | Entrepreneur 🚀 | TechMentor
Vavuniya District, Northern Province, Sri Lanka · [Contact info](#)
500+ connections

vithushan.work@gmail.com

Hi, Vithushan!



A screenshot of an X (Twitter) profile for Vithushan Logeswaran. The profile picture is the same as the LinkedIn one. The bio reads "Vithushan Logeswaran Dev-Vithushan SRE | AWS | Azure". There is an "Edit profile" button. Below the bio, it says "24 followers · 8 following". It also shows location "Sri Lanka" and handle "@i_Vithushan". Under "Achievements", there are three circular icons: a pink one with "YOLO", a blue one with a shark, and a yellow one with a cartoon character. The text "x2" is next to the shark icon.

Vithushan Logeswaran
Dev-Vithushan
SRE | AWS | Azure

[Edit profile](#)

24 followers · 8 following

Sri Lanka
@i_Vithushan

Achievements

Prepared by @Vithushan Logeswaran

Learning Path

- 1** Cloud Computing Introduction
- 2** Deep Dive into AWS
- 3** Projects

Offers



**Two Way
Communication**



**Friendly Manner
Talk**



**Ask Doubts
Anytime**



Task



You have developed an E-commerce website using the MERN stack. You are planning to set up a powerful computer as a server at home. What aspects should you focus on to ensure your server runs smoothly?



Cloud Computing

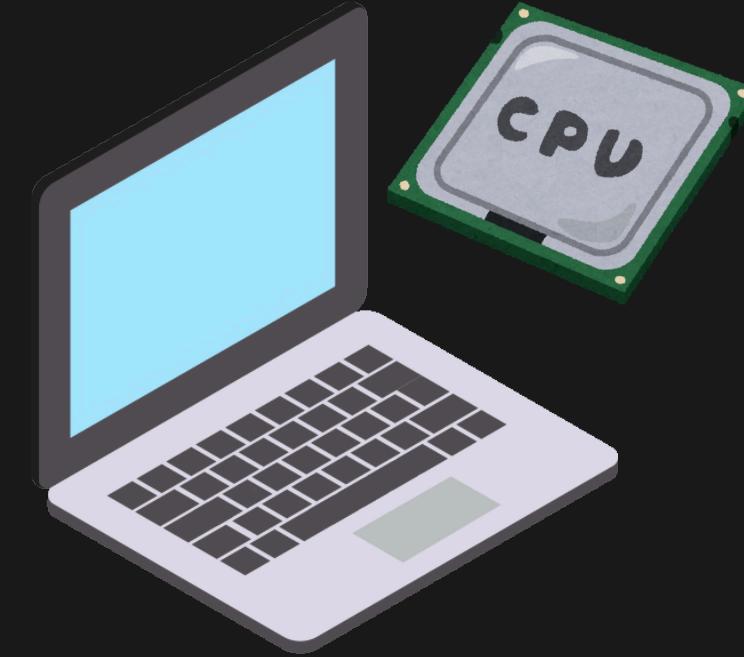
Cloud computing is the **on-demand** delivery of **IT resources** over the Internet with **pay-as-you-go** pricing



On-demand

On-demand refers to services, resources, or products made available to users whenever they need them

IT Resources



Computers



Networking



Storing



Pay-as-you-go

PAYG is a pricing model where users pay only for the resources or services they use, rather than paying a fixed amount upfront or committing to a subscription.

Top Cloud Providers



✓ AWS



✓ Azure



Google Cloud Platform

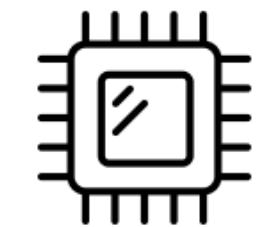
✓ GCP

WHY



- ✓ Market Dominance
- ✓ Strong Community and Resources
- ✓ Job Listings and Demand

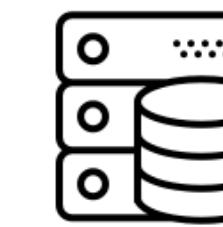
Amazon Web Services list



Compute



Storage



Database



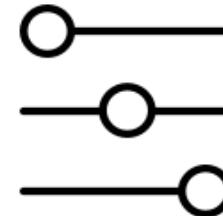
Migration



Networking & Content Delivery



Developer Tools



Management Tools



Media Services



Security, Identity & Compliance



Analytics



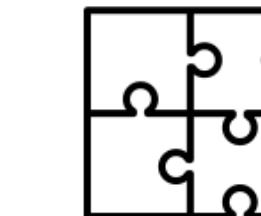
Machine Learning



Mobile Services



AR & VR



Application Integration



Customer Engagement

...



Let's Create **AWS Account**

Explore Free Tier products with a new AWS account.

To learn more, visit aws.amazon.com/free.



Sign up for AWS

Create your password

It's you! Your email address has X been successfully verified.

Your password provides you with sign in access to AWS, so it's important we get it right.

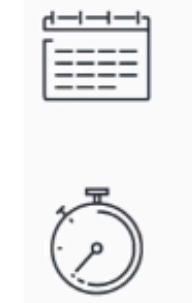
Root user password
.....

Confirm root user password
.....

Continue (step 1 of 5)

OR

Sign in to an existing AWS account



12 months free
Start from initial sign-up date

Trials
Start from service activation date

Full Name

Phone Number

Country or Region

Address

City

State, Province, or Region

Postal Code

I have read and agree to the terms of the [AWS Customer Agreement](#).

Continue (step 2 of 5)

Sign up for AWS

Secure verification

We will not charge you for usage below AWS Free Tier limits. We may temporarily hold up to \$1 USD (or an equivalent amount in local currency) as a pending transaction for 3-5 days to verify your identity.



Sign up for AWS

Billing Information

Credit or Debit card number

VISA **MasterCard** **AMEX** **Discover**

AWS accepts all major credit and debit cards. To learn more about payment options, review our [FAQ](#)

Expiration date

Month Year

Cardholder's name

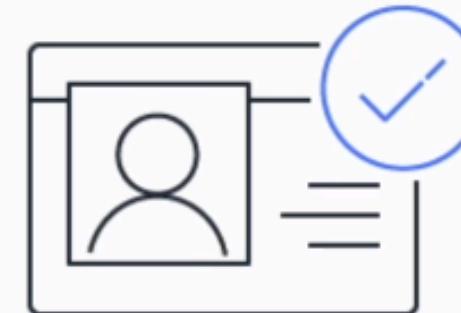
Billing address

Use my contact address
2810 N Church St, PMB 38894
Wilmington DE 19802-4447
US

Use a new address

Verify and Continue (step 3 of 5)

You might be redirected to your bank's website to authorize the verification charge.



Sign up for AWS

Confirm your identity

Before you can use your AWS account, you must verify your phone number. When you continue, the AWS automated system will contact you with a verification code.

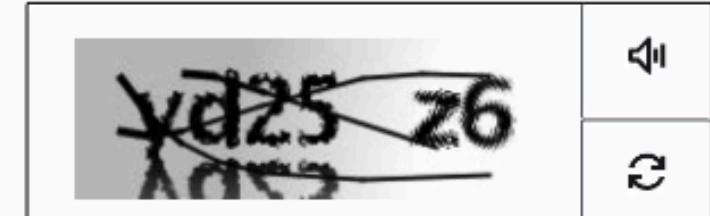
How should we send you the verification code?

Text message (SMS)
 Voice call

Country or region code

Mobile phone number

Security check



Type the characters as shown above

vd25z6

Send SMS (step 4 of 5)

aws

Sign up for AWS

Confirm your identity

Verify code

3831

Continue (step 4 of 5)

Having trouble? Sometimes it takes up to 10 minutes to retrieve a verification code. If it's been longer than that, [return to the previous page](#) and try again.



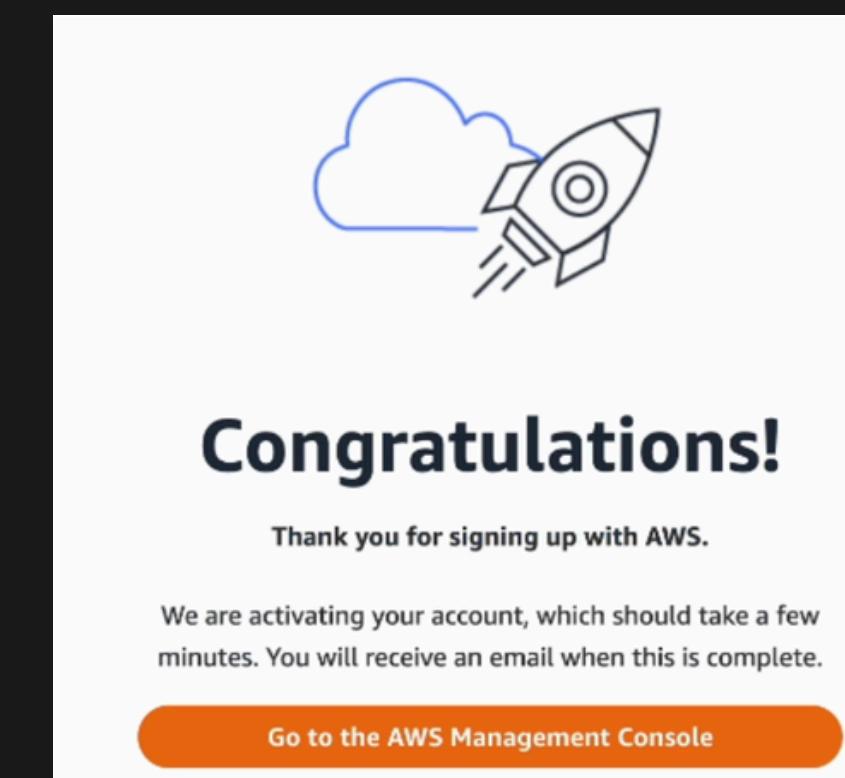
Sign up for AWS

Select a support plan

Choose a support plan for your business or personal account. [Compare plans and pricing examples](#)

You can change your plan anytime in the AWS Management Console.

| | | |
|---|---|--|
| <input checked="" type="radio"/> Basic support - Free <ul style="list-style-type: none">Recommended for new users just getting started with AWS24x7 self-service access to AWS resourcesFor account and billing issues onlyAccess to Personal Health Dashboard & Trusted Advisor | <input type="radio"/> Developer support - From \$29/month <ul style="list-style-type: none">Recommended for developers experimenting with AWSEmail access to AWS Support during business hours12 (business)-hour response times | <input type="radio"/> Business support - From \$100/month <ul style="list-style-type: none">24x7 tech support via email, phone, and chat1-hour response timesFull set of Trusted Advisor best-practice recommendations |
|---|---|--|



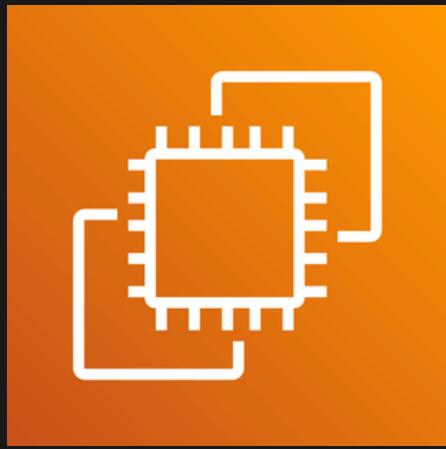
...

aws Day 02

Prepared by @Vithushan Logeswaran

Services in AWS

•••



EC2
(Elastic Compute
Cloud)



S3
(Simple Storage
Service)



VPC
(Virtual Private
Cloud)



AWS Lambda

...



200+
Services

Infrastructure in AWS



Regions

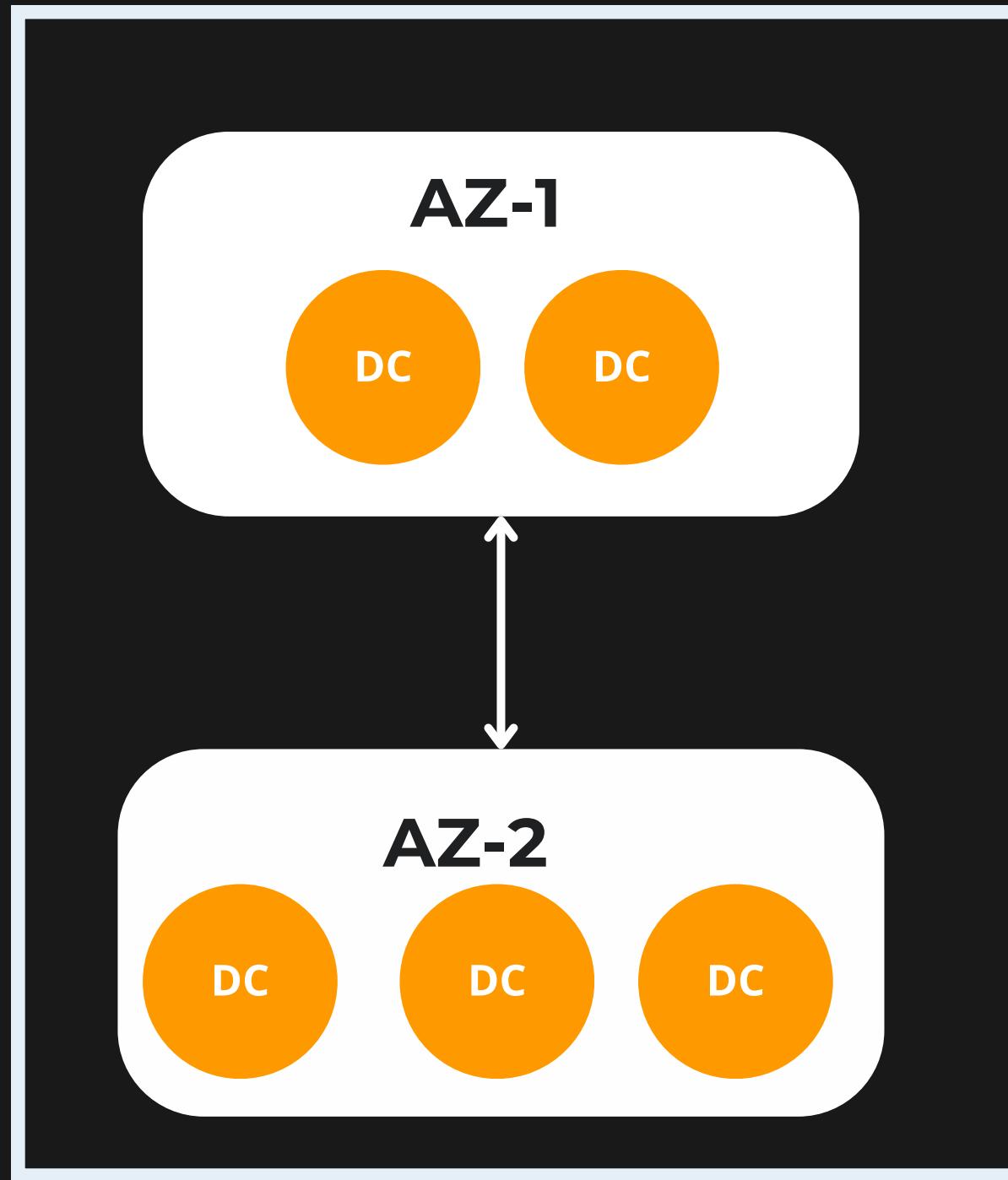


Availability Zones

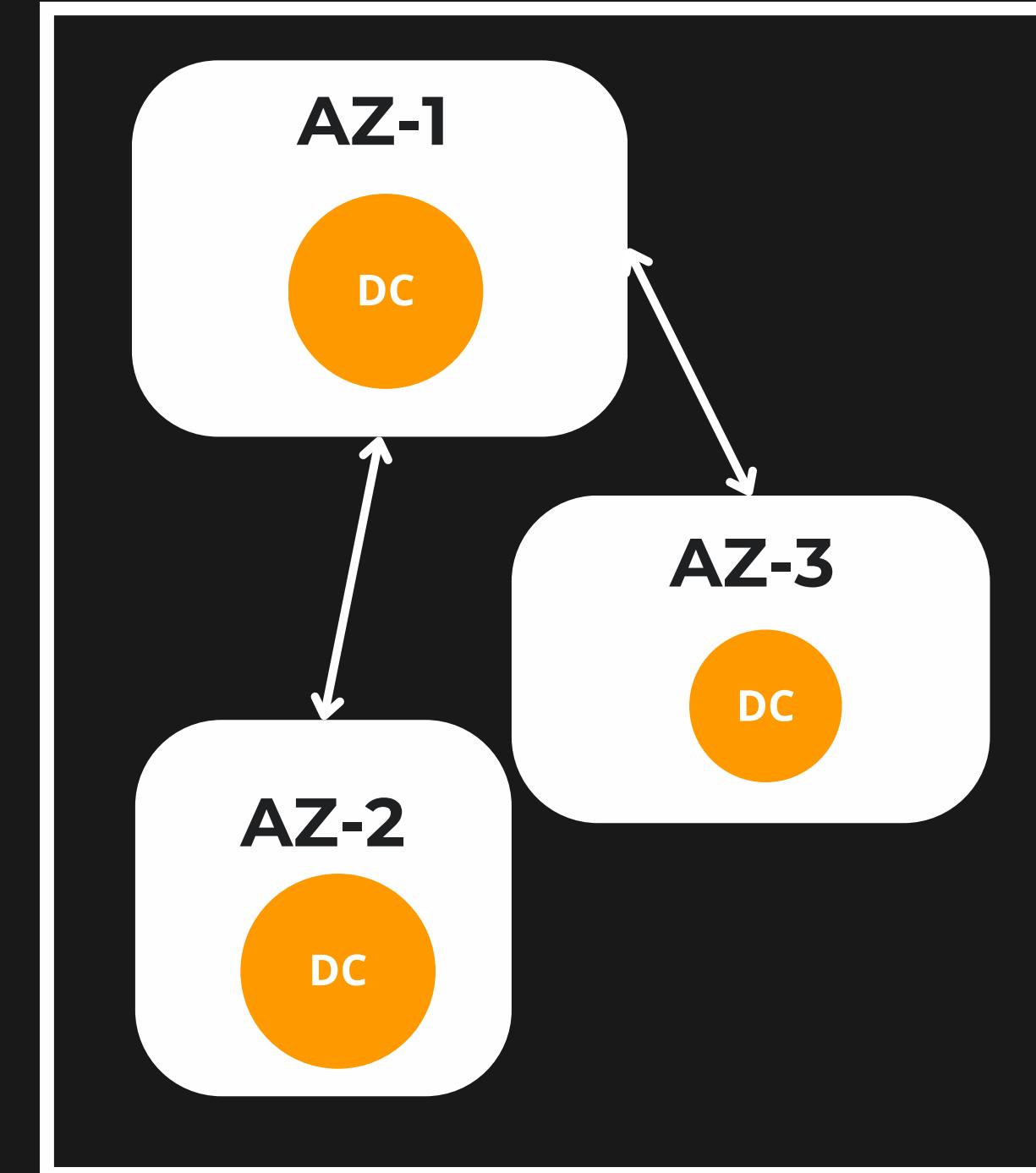


Data Centers

Region - A



Region - B



Infra link

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IAM Role, IAM Policy and IAM User

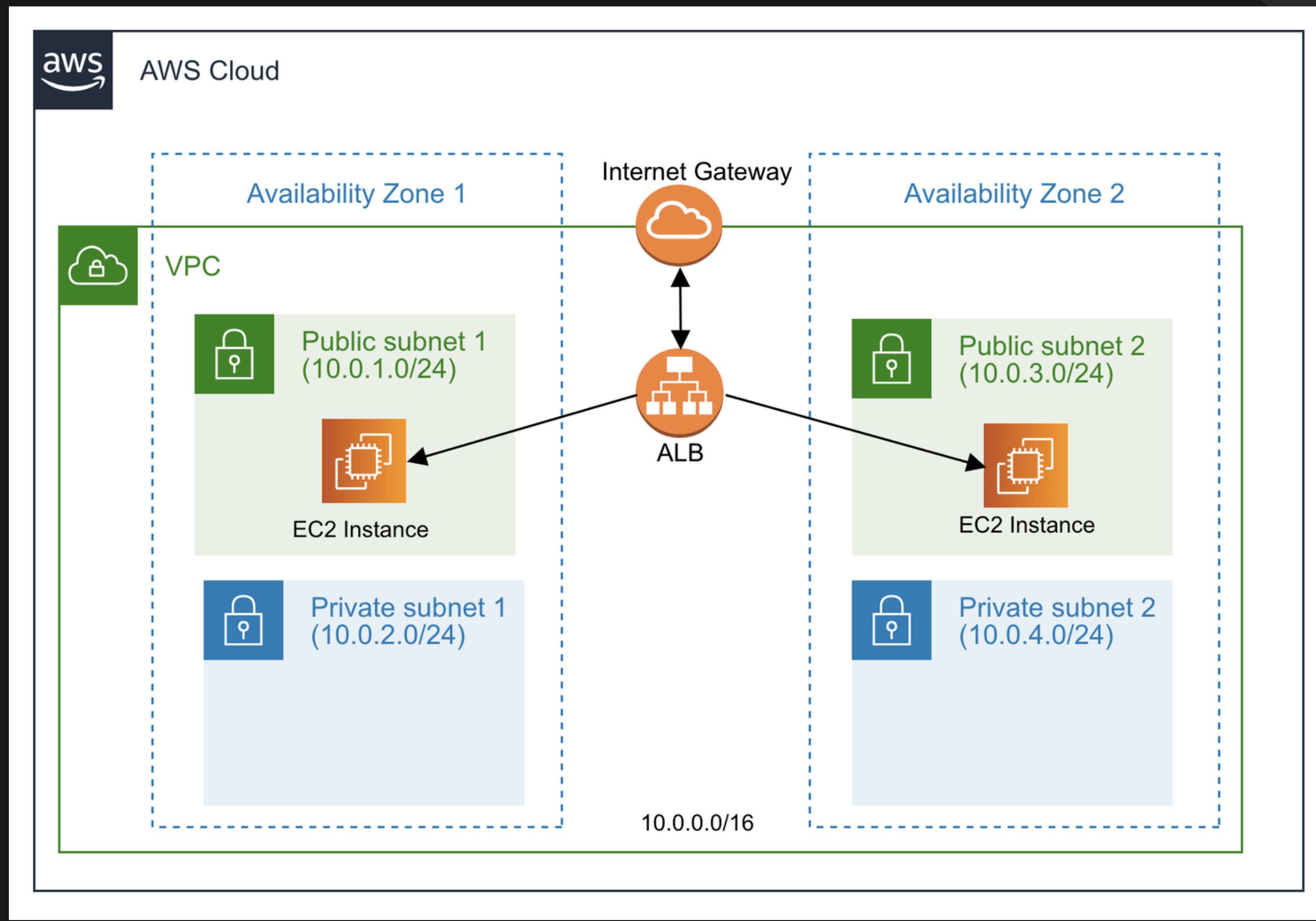
- ✓ An IAM Role is an entity that allows temporary access to AWS resources
- ✓ An IAM Policy is a JSON document that defines permissions (what actions can be performed and on which resources).
- ✓ An IAM User is an entity that represents a person or application in your AWS account

Regions, AZs and Datacenters

- ✓ Regions are named based on their location
(us-east-1, ap-south-1)
- ✓ AZs are represented as a, b, c, etc., within a region
(e.g., us-east-1a, us-east-1b).
- ✓ Each Availability Zone consists of one or more datacenters.

Understanding VPC (Virtual Private Cloud)

- ✓ A VPC is a logically isolated network within a region that spans multiple AZs
- ✓ You can create subnets within a VPC that are tied to specific AZs.
- ✓ Subnets are used to distribute resources across multiple AZs for fault tolerance



IP and CIDR

- ✓ An IP Address (Internet Protocol Address) is a unique identifier assigned to each device connected to a network (e.g 192.168.1.1 IPv4: 32-bit address)
- ✓ CIDR is a method for allocating IP addresses and managing routing

✓

| CIDR Block | Prefix Length | # of Hosts | Example IP Range |
|------------|---------------|------------|--|
| /8 | 8 bits | 16,777,214 | 10.0.0.0 – 10.255.255.255 |
| /16 | 16 bits | 65,534 | 192.168.0.0 – 192.168.255.255 |
| /24 | 24 bits | 254 | 192.168.1.0 – 192.168.1.255 |
| /32 | 32 bits | 1 | A single IP address (192.168.1.1/32) |