



Assessment 3

Design a DevOps process to design and automate CI/CD pipeline for a web application and a mobile app (any one of Android or iOS app)

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1. Introduction:

Design a DevOps process to design and automate CI/CD pipeline for a web application and a mobile app (any one of Android or iOS app)

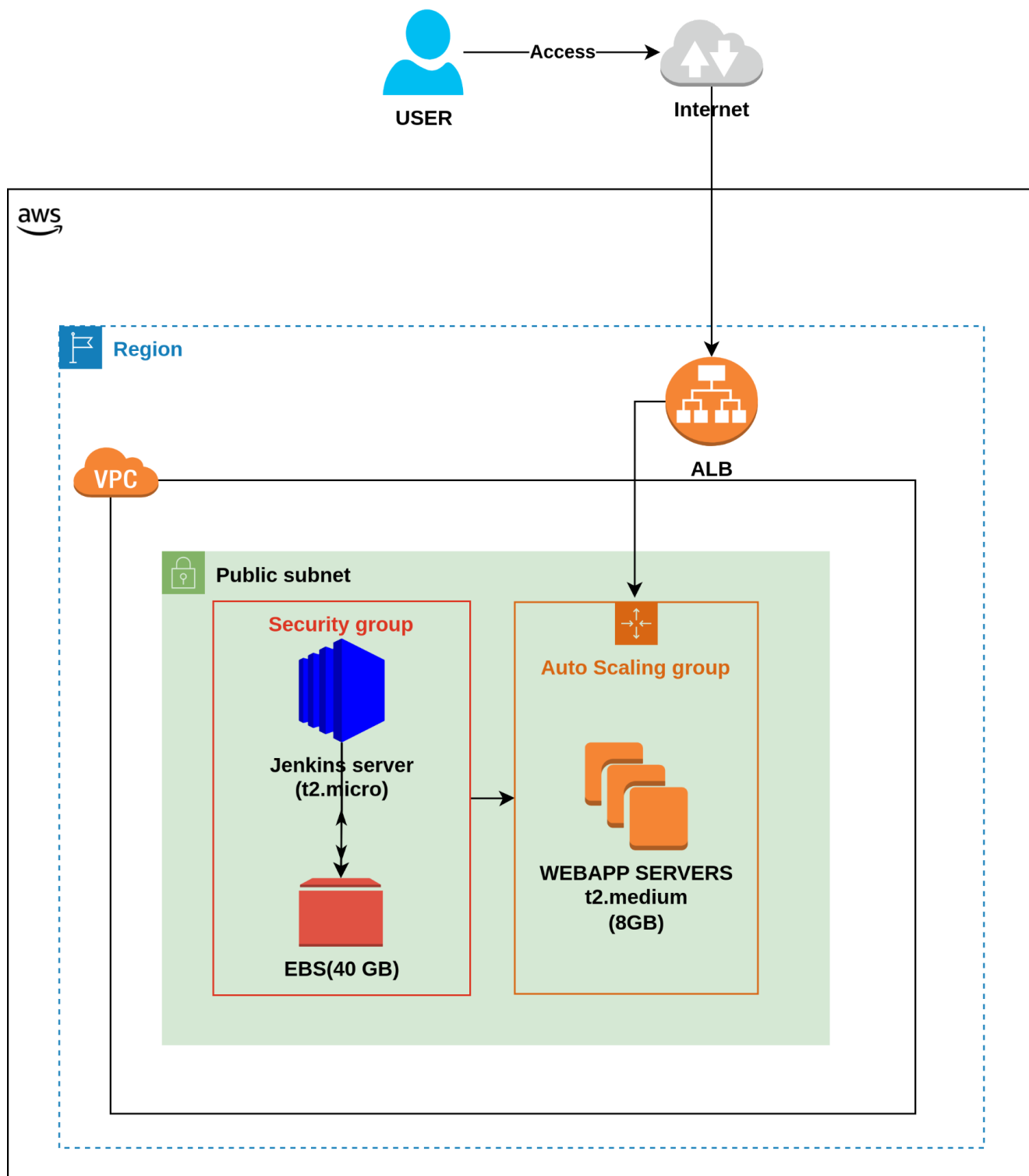
2. Objective:

Since the application is to be hosted on AWS Cloud, the objective of this document is to outline the solution architectures that can be proposed for CICD pipeline for the webapplication and the android app.

3. **AWS Solution Architecture:**

3.1. **Architecture.**

3.1.1. **Architecture Diagram**



3.1.2. Cost Estimation

S.No	Service	Configuration	Cost(\$)/Month
1	Elastic Cloud Compute(bastion)	t2.micro (gp2 8GB)	9.11
2	Elastic Cloud Compute(notes Server)	t2.small(gp2 8GB)	17.43
5	s3	Depend on Usage	Depend on Usage
TOTAL			26.54

Note: Cost will be Increased accordingly in case of any instances launched by the autoscaling group.

3.1.3. AWS Services

a. Elastic Cloud Compute(EC2)

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instance types comprise varying combinations of CPU, memory, storage, and networking capacity and give you the flexibility to choose the appropriate mix of resources for your applications. It is a scalable, user-configurable compute service that supports multiple methods for encrypting data at rest.

b. Elastic Load Balancer(ELB)

Elastic Load Balancing automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, IP addresses, and Lambda functions. It can handle the varying load of your application traffic in a single Availability Zone or across multiple Availability Zones.

c. S3 Bucket

Amazon S3 has a simple web services interface that you can use to store and retrieve any amount of data, at any time, from anywhere on the web. It gives any developer access to the same highly scalable, reliable, fast, and inexpensive data storage infrastructure that Amazon uses to run its own global network of websites



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