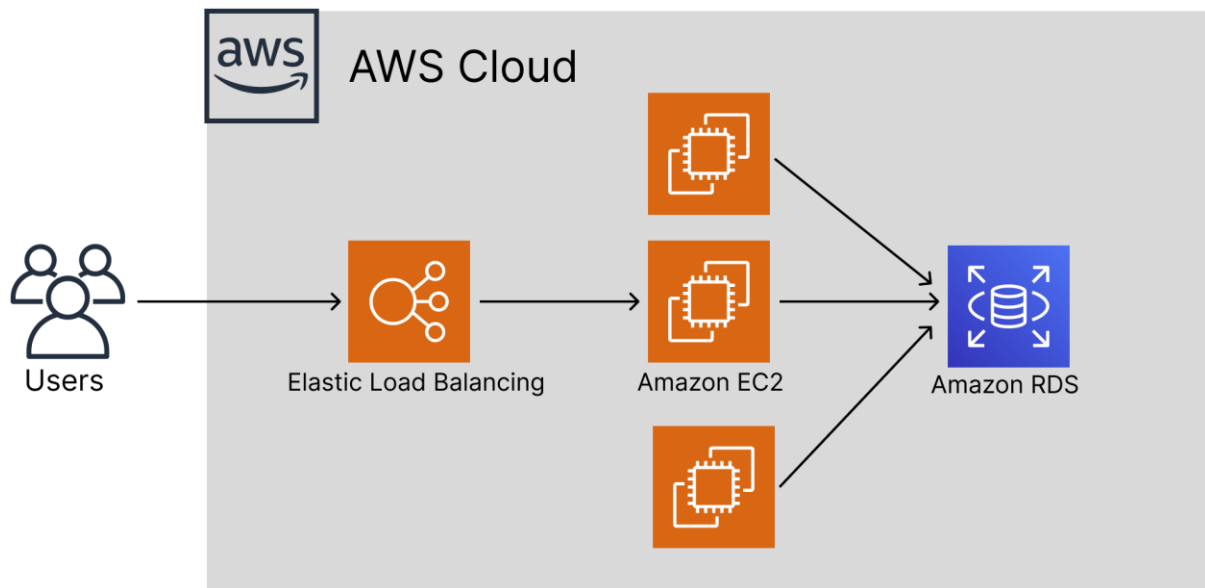


Assignment 6

Ques: Complete the below task:

1. Explain the below AWS Architecture

P.S – I have updated the diagram



This diagram has 3 AWS service – ELB, EC2 and RDS.

1. Traffic from user will not directly hit the web application deployed to EC2 instance. It has to go through ELB and ELB will route the request to EC2 instance as per traffic.
2. ELB is connected with EC2 to distribute all the traffic from user to EC2 to handle the load.
3. EC2 instances are connected with RDS database to store the relational data.

2. Implement the same in the AWS(only do a proper connection between service)

1. Create EC2 instance

The screenshot shows the 'Instances' page in the AWS Management Console. It displays a list of three EC2 instances, all in a 'Running' state. The instances are named 'WebServer3', 'WebServer1', and 'WebServer2'. Each instance is a 't2.micro' type and has passed all status checks. They are located in different Availability Zones: 'us-east-1c', 'us-east-1b', and 'us-east-1a'. The table includes columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, Availability Zone, and Public IPv4 address.

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4
<input type="checkbox"/>	WebServer3	i-08b98f83305652819	Running	t2.micro	2/2 checks passed	No alarms	us-east-1c	ec2-34-22
<input type="checkbox"/>	WebServer1	i-0174d651333204332	Running	t2.micro	2/2 checks passed	No alarms	us-east-1b	ec2-54-85
<input type="checkbox"/>	WebServer2	i-0422be07f012fc2c9	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-44-19

Created 3 EC2 instance in 3 different region

2. Create ELB and Target group

EC2 > Load balancers > WebAppELB

WebAppELB

arn:aws:elasticloadbalancing:us-east-1:563684797122:loadbalancer/app/WebAppELB/0aaff498311b0b4d

Load balancer type Application	DNS name WebAppELB-702142689.us-east-1.elb.amazonaws.com (A Record)	Status Active	VPC vpc-05a95966be119e38e
IP address type IPv4	Scheme Internet-facing	Availability Zones subnet-04bf61608e8734bc3 us-east-1a (use1-az1) subnet-084e4b7f5a3d739d7 us-east-1b (use1-az2) subnet-01049223c59d2f807 us-east-1c (use1-az4)	Hosted Zone Z35SXDOTRQ7X7K
Created At December 13, 2022, 11:19 (UTC+05:30)			

Created Load balancer with 3 Availability Zone

Listeners Network mapping Security Monitoring Integrations Attributes Tags

Listeners (1)

A listener checks for connection requests on its port and protocol. Traffic received by the listener is routed according to its rules.

Search

	Protocol:Port	ARN	Security policy	Default SSL cert	Default routing rule
	HTTP:80	ARN	Not Applicable	Not Applicable	1. Forward to <ul style="list-style-type: none">ELB-Target: 1 (100%)Group-level stickiness: Off

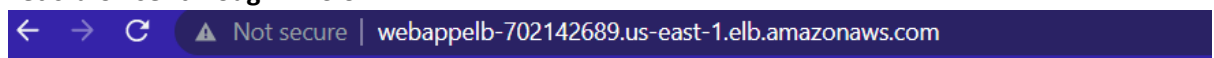
Listening to Port 80 with Target Group ELB-Target which redirect traffic to EC2 instances

Webserver 1 Private IP - 172.31.80.39

Webserver 2 Private IP - 172.31.15.169

Webserver 3 Private IP - 172.31.23.157

Let's browser through DNS of ELB



Hello World from ip-172-31-23-157.ec2.internal

It redirects traffic to webserver 3 after refresh it redirects to Webserver 2



Hello World from ip-172-31-15-169.ec2.internal

3. Create RDS database

RDS > Databases > database-1

database-1

ModifyActions

Summary

DB identifier database-1	CPU 3.11%	Status Available	Class db.t2.micro
Role Instance	Current activity 0 Connections	Engine MySQL Community	Region & AZ us-east-1a

Connectivity & securityMonitoringLogs & eventsConfigurationMaintenance & backupsTags

Connectivity & security

Endpoint & port
Endpoint

Networking
Availability Zone

Security
VPC security groups

Created RDS Databases

Connected compute resources (3) Info

Connections to compute resources that were created automatically by RDS are shown here. Connections to compute resources that were created manually aren't shown.

Filter by compute resources

Resource identifier	Resource type	Availability zone	RDS security group	Compute resource security group
i-0174d651333204332	EC2 Instance	us-east-1b	rds-ec2-1	ec2-rds-1
i-0422be07f012fc2c9	EC2 Instance	us-east-1a	rds-ec2-1	ec2-rds-1
i-08b98f83305652819	EC2 Instance	us-east-1c	rds-ec2-1	ec2-rds-1

Connected EC2 instances with RDS database