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Note :- The answer is in bullets (→)

Assignment-6 : AWS Architecture

Ques: Complete the below task:

1. Explain the below AWS Architecture



→ In this architecture, there is an Elastic Load Balancer (ELB) that sits in front of one or more Amazon Elastic Compute Cloud (EC2) instances. The ELB is a load balancing service that automatically distributes incoming application traffic across multiple EC2 instances in one or more Availability Zones.

The EC2 instances run web service application and are the compute resources for your application.

There is also an Amazon Relational Database Service (RDS) instance that is connected to the EC2 instances. The EC2 instances can connect to the RDS instance to read and write data to the database as needed.

In this architecture, the ELB distributes incoming traffic to the EC2 instances, which handle the request and may also interact with the RDS instance as needed to retrieve or store data. This architecture provides a scalable and highly available solution for running application.

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

→ To implement the connection between these services in AWS, follow these steps:

- I. Launch one or more Amazon EC2 instances. Run apache webserver on each instance and started a server.

Instances (1/2) Info Refresh Connect Instance state ▼ Actions ▼ Lau

Find instance by attribute or tag (case-sensitive)

Instance state = running X Clear filters

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input checked="" type="checkbox"/>	Webserver-1	i-04b85e76268481457	Running	t2.micro	2/2 checks passed	No alarms
<input type="checkbox"/>	Webserver-2	i-0652ebc3f72c13bfa	Running	t2.micro	2/2 checks passed	No alarms

Instance: i-04b85e76268481457 (Webserver-1)

Details Security Networking Storage Status checks Monitoring Tags

▼ Instance summary Info

Instance ID i-04b85e76268481457 (Webserver-1)	Public IPv4 address 18.208.128.254 open address	Private IPv4 addresses 172.31.84.169
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-18-208-128-254.compi open address
Hostname type IP name: io-172-31-84-169.ec2.internal	Private IP DNS name (IPv4 only) io-172-31-84-169.ec2.internal	

Instances (1/2) Info Refresh Connect Instance state Actions Launch ins

Find instance by attribute or tag (case-sensitive)

Instance state = running Clear filters

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input type="checkbox"/>	Webserver-1	i-04b85e76268481457	Running	t2.micro	2/2 checks passed	No alarms
<input checked="" type="checkbox"/>	Webserver-2	i-0652ebc3f72c13bfa	Running	t2.micro	2/2 checks passed	No alarms

Instance: i-0652ebc3f72c13bfa (Webserver-2)

Details | Security | Networking | Storage | Status checks | Monitoring | Tags

▼ Instance summary Info

Instance ID i-0652ebc3f72c13bfa (Webserver-2)	Public IPv4 address 18.212.105.174 open address	Private IPv4 addresses 172.31.45.19
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-18-212-105-174.compute-1.amazonaws.com open address
Hostname type IP name: ip-172-31-45-19.ec2.internal	Private IP DNS name (IPv4 only) ip-172-31-45-19.ec2.internal	

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- II. Created an Elastic Load Balancer (ELB) using the AWS Management Console. And added EC2 instances in Target Groups of Load Balancer.

EC2 > Load balancers > Assignment-ELB

Assignment-ELB Refresh Actions

▼ Details

arn:aws:elasticloadbalancing:us-east-1:162477790861:loadbalancer/app/Assignment-ELB/3fa51443f67259aa

Load balancer type Application	DNS name Assignment-ELB-263058720.us-east-1.elb.amazonaws.com (A Record)	Status Active	VPC vpc-0ec45d99f4581c83e
IP address type IPv4	Scheme Internet-facing	Availability Zones subnet-0838514239bd3aa61 us-east-1a (use1-az6) subnet-025e4910567dcf16c us-east-1b (use1-az1) subnet-077e653c2b85881f0 us-east-1c (use1-az2) subnet-0df8ff83798a177f9 us-east-1d (use1-az4)	Hosted Zone Z35SXDOTRQ7X7K

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- III. Created an Amazon RDS instance and configure it to accept connections from the Amazon EC2 instances.
- IV. Updated the security group settings for the Amazon EC2 instances to allow incoming traffic from the Amazon RDS instance (i.e. Port = 3306).
- V. Updated the security group settings for the Amazon RDS instance to allow incoming traffic from the Amazon EC2 instances.

