

## Assignment 6 - AWS Architecture



Ques: **Complete the below task:**

### 1. Explain the below AWS Architecture

Answer:

The above architecture represents AWS Services configurations. The first image represents the Load Balancer, responsible for handling the load of incoming requests from the network. It uses a health check function to know which EC2 machine is available to forward the request. The second image represents the EC2 machine, which is used for computation. The Load balancer is connected to the EC2 machine using the target group. The third image represents the Relational Database which is connected to the EC2 image we can either connect to the EC2 machine during the creation of EC2 if the RD is available or we can connect the RD to the existing EC2 machine during the creation or after the creation of RD.

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

First I created VPC, subnets, Internet gateway and routing table. Under this VPC I have created an EC2 Machine, RDS, and Load Balancer named demo.

**EC2 Machine named demo:**

Highlighted the instance id for proof of configuration.

**Instances (1/1)** [Info](#)

Find instance by attribute or tag (case-sensitive)

Instance state = running [Clear filters](#)

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
<input checked="" type="checkbox"/>	demo	<a href="#">i-0286ad2456cf2648</a>	Running	t2.micro	2/2 checks passed	No alarms	ap-south-1a

**Instance: i-0286ad2456cf2648 (demo)**

[Details](#) | [Security](#) | [Networking](#) | [Storage](#) | [Status checks](#) | [Monitoring](#) | [Tags](#)

**▼ Instance summary** [Info](#)

Instance ID <a href="#">i-0286ad2456cf2648 (demo)</a>	Public IPv4 address -	Private IPv4 addresses <a href="#">10.0.0.209</a>
IPv6 address -	Instance state Running	Public IPv4 DNS -
Hostname type IP name: ip-10-0-0-209.ap-south-1.compute.internal	Private IP DNS name (IPv4 only) <a href="#">ip-10-0-0-209.ap-south-1.compute.internal</a>	Elastic IP addresses -
Answer private resource DNS name IPv4 (A) -	Instance type t2.micro	AWS Compute Optimizer finding <a href="#">Opt-in to AWS Compute Optimizer for recommendati</a>
Auto-assigned IP address -	VPC ID <a href="#">vpc-07351dbcf3b728211 (demo)</a>	

Then I created a Load Balancer for which I created a target group for assigning the EC2 machine.

### Target Group Named demo:

**EC2 > Target groups**

**Target groups (1/1)** [Info](#)

Search or filter target groups

<input checked="" type="checkbox"/>	Name	ARN	Port	Protocol	Target type	Load balancer
<input checked="" type="checkbox"/>	demo	<a href="#">arn:aws:elasticloadbalancing:ap-south-1:698512717870:targetgroup/demo/5b28a938dc5e9858</a>	80	HTTP	Instance	<a href="#">None associated</a>

**Target group: demo**

**Details**  
[arn:aws:elasticloadbalancing:ap-south-1:698512717870:targetgroup/demo/5b28a938dc5e9858](#)

Target type Instance	Protocol : Port HTTP: 80	Protocol version HTTP1	VPC <a href="#">vpc-07351dbcf3b728211</a>
IP address type IPv4	Load balancer <a href="#">None associated</a>		

Total targets	Healthy	Unhealthy	Unused	Initial	Draining
1	0	0	1	0	0

Highlighted the instance id for proof of configuration.

Targets | Monitoring | Health checks | Attributes | Tags

Registered targets (1) Refresh Deregister Register targets

<input type="checkbox"/>	Instance ID	Name	Port	Zone	Health status	Health status details
<input type="checkbox"/>	<a href="#">i-0286ad2456fcf2648</a>	demo	80	ap-south-1a	<span>unhealthy</span>	Health checks failed

Load Balancer named demo:

Instances (1/1) [Info](#) Refresh Connect Instance state Actions Launch instances

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
<input checked="" type="checkbox"/>	demo	<a href="#">i-0286ad2456fcf2648</a>	<span>Running</span>	t2.micro	<span>2/2 checks passed</span>	No alarms	ap-south-1a

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Instance: [i-0286ad2456fcf2648 \(demo\)](#) Settings Close

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

▼ Instance summary [Info](#)

Instance ID <a href="#">i-0286ad2456fcf2648 (demo)</a>	Public IPv4 address -	Private IPv4 addresses <a href="#">10.0.0.209</a>
IPv6 address -	Instance state <span>Running</span>	Public IPv4 DNS -
Hostname type IP name: ip-10-0-0-209.ap-south-1.compute.internal	Private IP DNS name (IPv4 only) <a href="#">ip-10-0-0-209.ap-south-1.compute.internal</a>	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t2.micro	AWS Compute Optimizer finding <a href="#">Opt-in to AWS Compute Optimizer for recommendati</a>
Auto-assigned IP address -	VPC ID <a href="#">vpc-07351dbcf3b728211 (demo)</a>	

RDS named demo:

**Consider creating a Blue/Green Deployment to minimize downtime during upgrades**

You may want to consider using Amazon RDS Blue/Green Deployments and minimize your downtime during upgrades. A Blue/Green Deployment provides a staging environment for changes to production databases. [RDS User Guide](#) [Aurora User Guide](#)

**Databases**☒ Group resources

Modify

Actions ▾

Restore from S3

Create database

&lt; 1 &gt;



<input type="checkbox"/>	DB identifier ▲	Role ▼	Engine ▼	Region & AZ ▼	Size ▼	Status ▼
<input checked="" type="radio"/>	demo-database-1	Instance	MySQL Community	ap-south-1a	db.t3.micro	✓ Available

Highlighted the instance id for proof of configuration.

demo-database-1

Instance

ap-south-1a

-

-

-

**Proxies (0)**

Actions ▾

Create proxy

&lt; 1 &gt;



Proxy identifier ▲	Status ▼	Engine family ▼
No proxies You don't have any proxies. <div>Create proxy</div>		

**Connected compute resources (1)** [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.

&lt; 1 &gt;



Resource identifier  ▲	Resource type ▼	Availability zone ▼	RDS security group  ▼	Compute resource security group  ▼
<a href="#">i-0286ad2456fcf2648</a>	EC2 Instance	✓ ap-south-1a	<a href="#">rds-ec2-2</a>	<a href="#">ec2-rds-2</a>