**Load Balancer**

A load balancer accepts incoming traffic from clients and routes requests to EC2 instances (Targets).

The load balancer also monitors the health of its registered targets and ensures that it routes traffic only to healthy targets.

When the load balancer detects an unhealthy target, it stops routing traffic to that target. It then resumes routing traffic to that target when it detects that the target is healthy again.

**Step 1:** Create Linux Machine

Launch instance --- Amazon Linux -- No of instances - 1 --- Name Tag- Lin-1 --- Security Group - LinSG09

Description - LinSG

Add Rule

HTTP -- Anywhere

Launch

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**Step 2:** Convert pem to ppk file

**Step 3:** Access the machine

**Step 4:** Run the commands to install web package

sudo su

yum update -y

yum install httpd -y

cd /var/www/html

echo "MyGoogle-1" > index.html

ls

service httpd start

chkconfig httpd on

**Step 5:** Access the webserver by using public ip

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**Step 6:** Launch one more Linux Machine and install Web package

Amazon Linux -- Step 3: Advanced Details - User data

#!/bin/bash

sudo su

yum update -y

yum install httpd -y

cd /var/www/html

echo "MyGoogle-2" > index.html

service httpd start

chkconfig httpd on

Add rule – HTTP – Anywhere Next -- Add Name Tag -- Step 6: Select existing security group -- Choose existing key pair -- Launch instance.

**Step 7:** Create load balancers

Select classic load balancer

Load Balancer Name - MyLB --> Next ----> select existing security group – check the servers security group ---> Next -- Step 4:

Response Timeout - 2 Seconds

Interval - 5 Seconds

Unhealthy threshold - 2

Healthy threshold - 2

Next -- Attach both the instances

Next -- Next --Create

**Step 8:** Let’s verify the 2nd instance manually

Select public ip and paste in browser

**Step 9:** Access the load balancer by using DNS

and experience the load balancer. ( MyLB-1252330318.ap-south-1.elb.amazonaws.com  )

**Step 10:** If one server is down, it should redirect the traffic to another server.

1) we can stop/terminate the machine

2) remove the file / rename the file

Let’s remove index.html file in server1

Go to putty

ls (To see the list of files)

# rm index.html

Now, access the load balancer, traffic should be redirected to 2nd server.

How can we know, which instance is down?

Go to load balances ---> instances tab,

We can see the status is OutOfService.

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Let’s recreate index.html file

# echo "Google-1" > index.html

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Now load balance will start sending the traffic to server1

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To avoid billing ----> remove both the instance ----> delete load balancer

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#httpd-webserver-install

yum update -y

yum install -y httpd

systemctl start httpd

systemctl enable httpd

echo "<h1>Lakshmi Webserver - from $(hostname -f)</h1>" > /var/www/html/index.html