

Deploying a Website Using an Application Load Balancer (AWS)

1. Architecture Overview

This setup deploys a highly available website using:

- Amazon Web Services
- Amazon EC2 instances (web servers)
- Application Load Balancer (ALB)
- Target Group

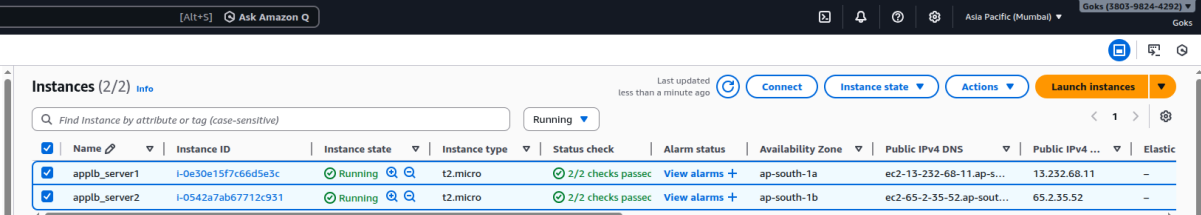
Traffic Flow:

Client → ALB → Target Group → EC2 Instances

Prerequisites:

- AWS account
- VPC with:
 - At least 2 public subnets in different Availability Zones
- Security Groups configured
- Website files (HTML/CSS/JS or application stack)

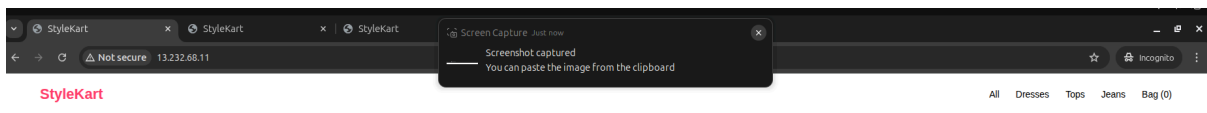
1. Launch 2 EC2 Instances with different Av's zones and run your application on nginx



Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic
applb_server1	i-0e30e15f7c66d5e3c	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1a	ec2-13-232-68-11.ap-s...	13.232.68.11	-
applb_server2	i-0542a7ab67712c931	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1b	ec2-65-2-35-52.ap-sout...	65.2.35.52	-

1.1 After the instance's is running select the instance and and connect it and use the code to the run the website on nginx

```
ubuntu@ip-172-31-6-35:~/stylekart$ history
 1 sudo apt update && sudo apt upgrade -y
 2 sudo apt install git && git --version
 3 git clone https://github.com/Gokula-krishnanR/stylekart.git
 4 ls
 5 cd stylekart/
 6 sudo apt install nginx -y
 7 ls
 8 sudo mv index.html script.js styles.css /var/www/html
 9 history
10 clear
11 history
ubuntu@ip-172-31-6-35:~/stylekart$
```



2. Create Target group:

- 1.Target type - Instances
2. Create a target name, eg., **sk-tg**
3. Click next → **select register target**
- 4.Click select → **Create target group**

sk-tg

Details

arn:aws:elasticloadbalancing:ap-south-1:380398244292:targetgroup/sk-tg/0edb5ee8151a92bb

Target type
Instance

Protocol : Port
HTTP: 80

Protocol version
HTTP1

VPC
[vpc-0b320a62a88e0e5fc](#)

IP address type
IPv4

Load balancer
[SK-ALB](#)

Target access analysis
[Access issue detected](#)

2 Total targets

0 Healthy

0 Unhealthy

0 Anomalous

2 Unused

0 Initial

0 Draining

Distribution of targets by Availability Zone (AZ)
Select values in this table to see corresponding filters applied to the Registered targets table below.

Targets | Monitoring | Health checks | Attributes | Tags

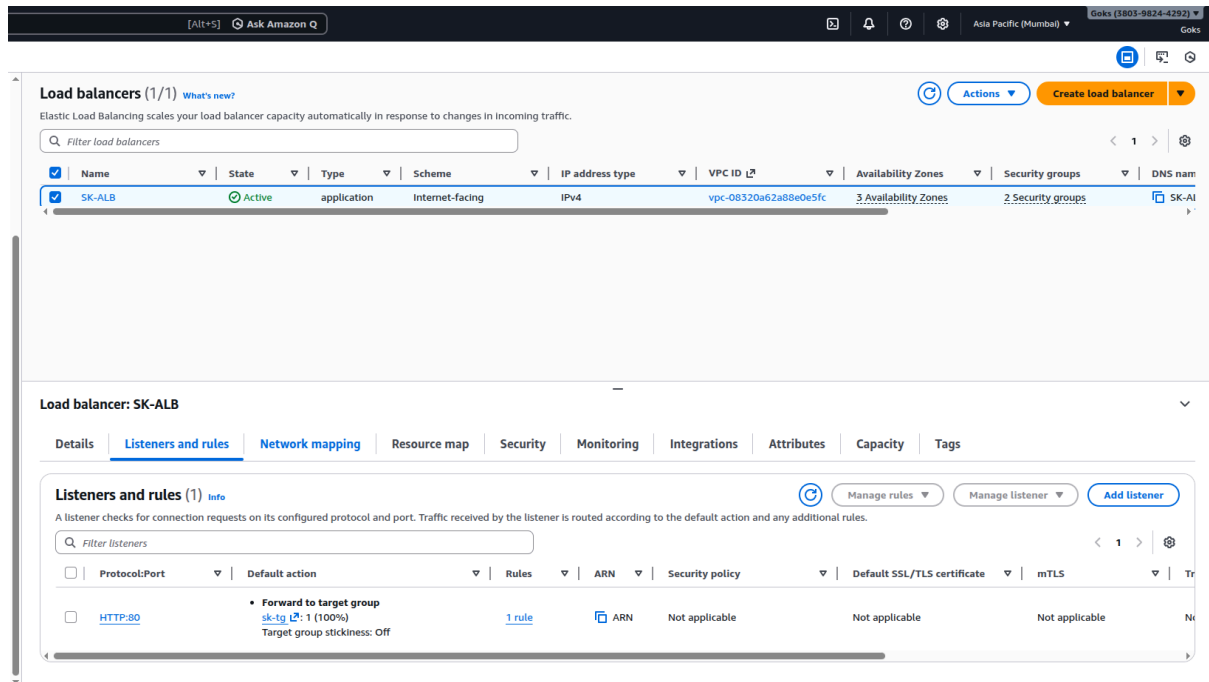
Registered targets (2)

Target groups route requests to individual registered targets using the protocol and port number specified. Health checks are performed on all registered targets according to the target group's health check settings. Anomaly detection is automatically applied to HTTP/HTTPS target groups with at least 3 healthy targets.

Instance ID	Name	Port	Zone	Health status	Health status details	Admini...	Overri...	Launch...	Anomaly detectio...
i-0542a7ab67712c931	applb_server2	80	ap-south-1b (a...	Unused	Target group is not co...	-	-	February ...	Normal
i-0a30e15f7c6d5e3c	applb_server1	80	ap-south-1a (a...	Unused	Target group is not co...	-	-	February ...	Normal

4. Create a application load balancer

1. Click on create load balancer → Click **create application load balancer**
2. Give a load balancer name → **sk-alb**
3. In networking mapping → **select all the availability zone's and subnet's**
4. In listeners and routing → In Target Group, select the target group you created before. Eg **sk-tg**
5. Then scroll down until you reach and click **Create load balancer**
6. Wait until the state is **Active**



6. Check the website is running :

