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AWS CLOUD COMPUTING

ELASTIC LOAD BALANCER (ELB)

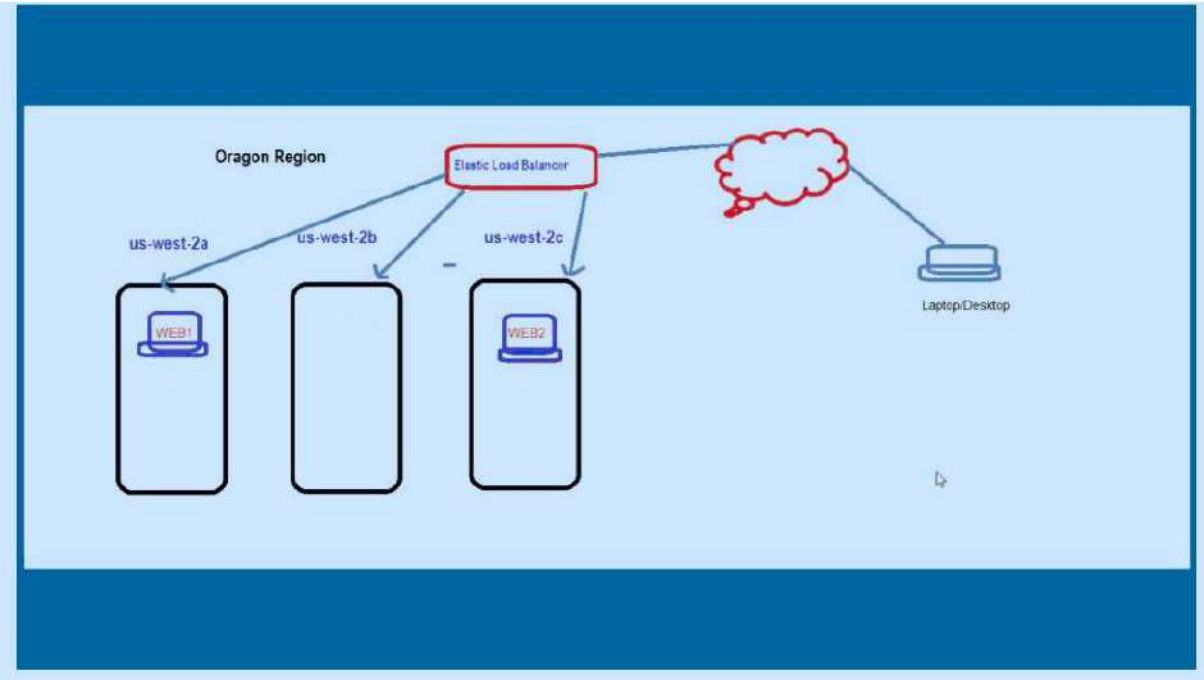
Elastic Load Balancer (ELB)

Elastic Load Balancing automatically distributes incoming application traffic across multiple targets, such as Amazon EC2 instances, containers, IP addresses, and Lambda functions. It can handle the varying load of your application traffic in a single Availability Zone or across multiple Availability Zones. Elastic Load Balancing offers three types of load balancers that all feature the high availability, automatic scaling, and robust security necessary to make your applications fault tolerant.

OBJECTIVE

To configure Elastic Load Balancer in AWS

Topology



Pre-Requisites

User should have AWS Account, or IAM user have EC2 Full Access

Task:

Launch two instances in two different Availability Zones
Configure httpd (Apache2) Web Server in each instance
Verify web server from browser.
Configure Elastic Load Balancer.
Verify Web Server through ELB

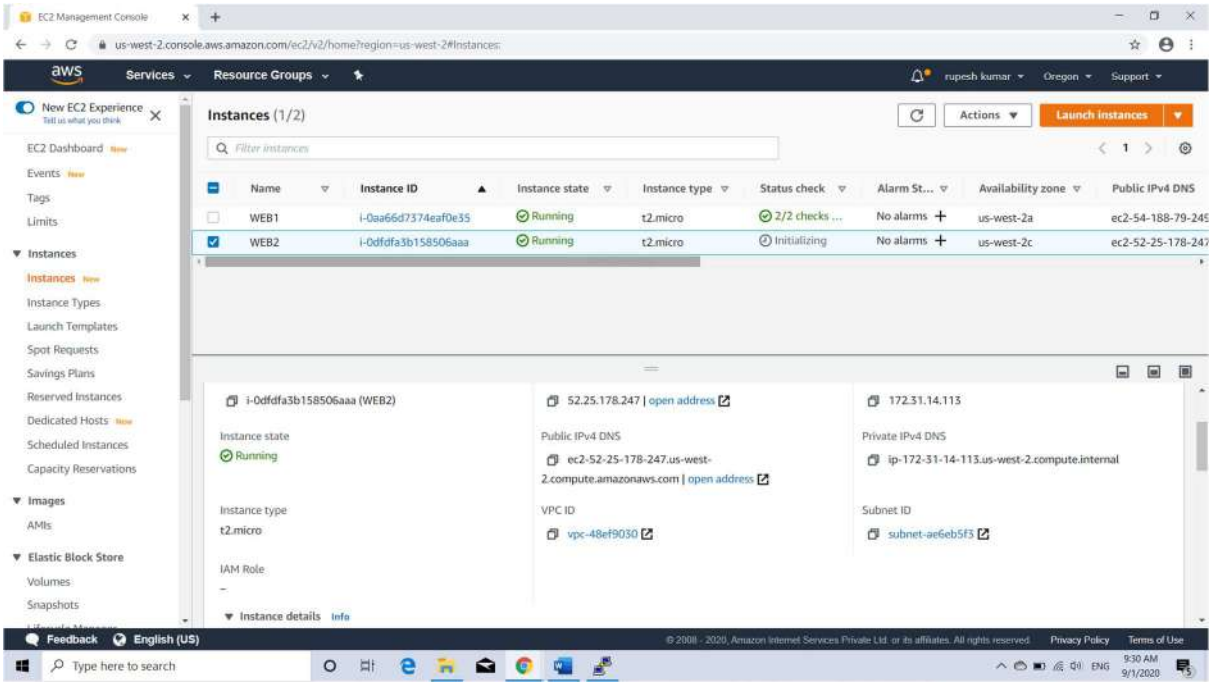
1. **Launch two installs with apache web server in two separate Availability Zone,**
   For Example, US-West-2a and US-West-2c

2. **Check Websites are running**

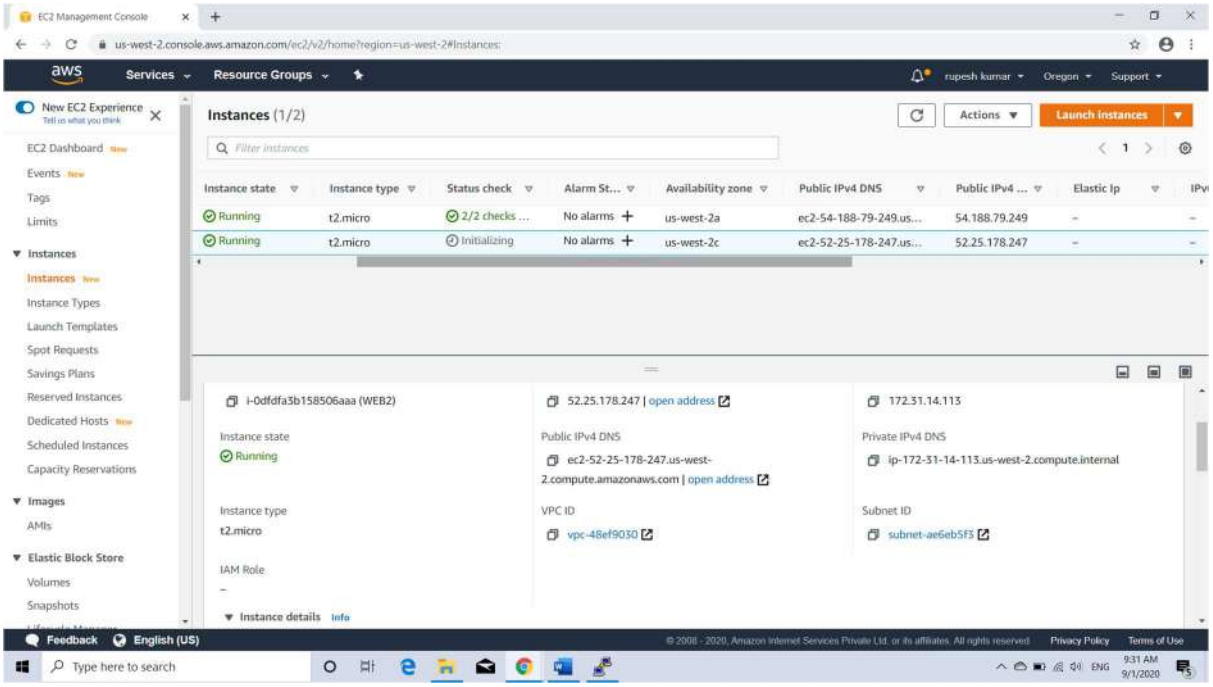
Open the Browser

Provide public IP for both instances.

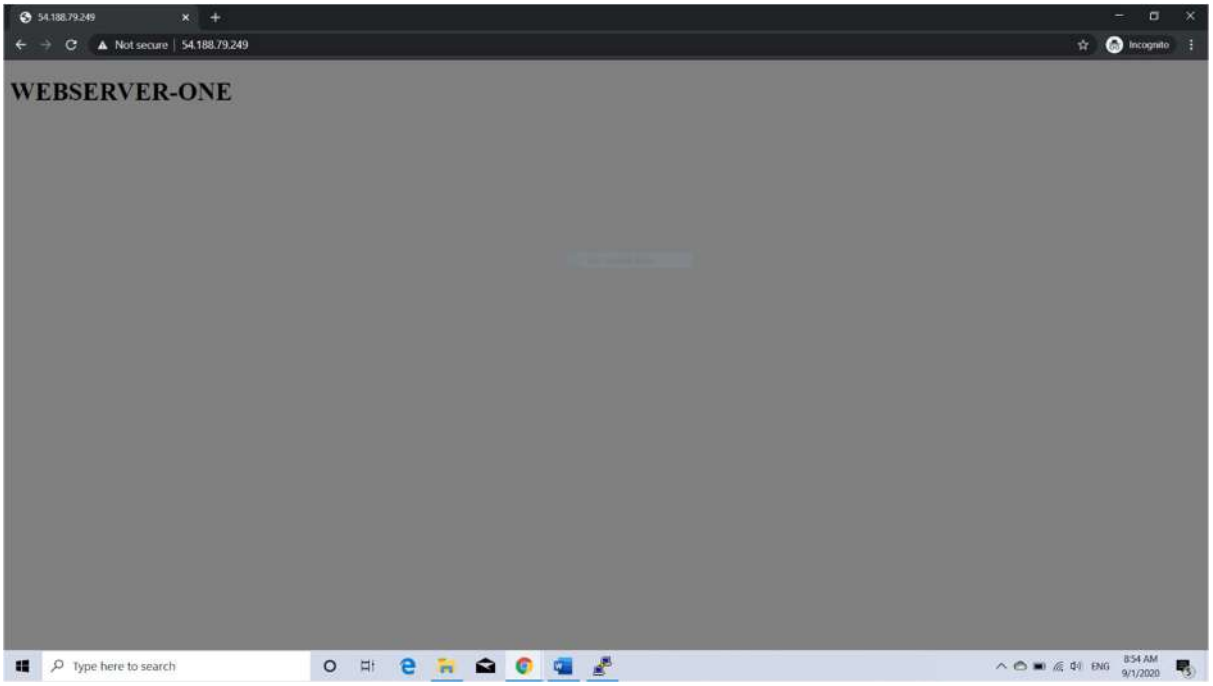
Verify both websites are running.



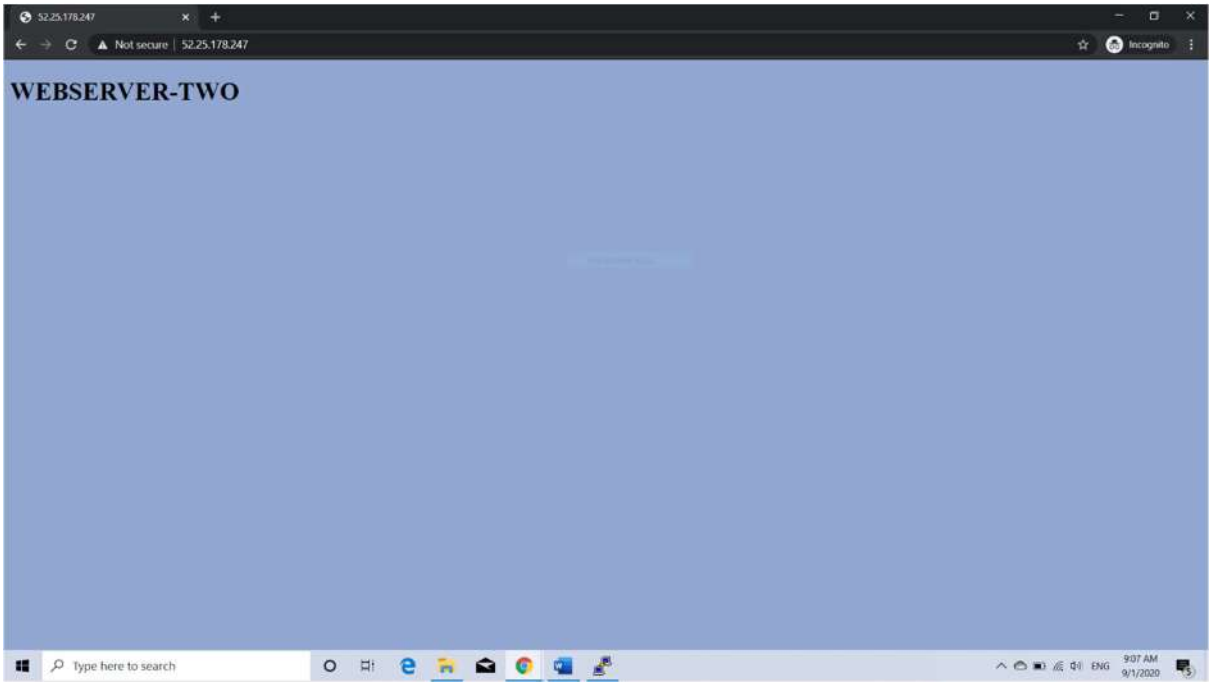
Verify public IP of both instances



Verify Output of Web Server one

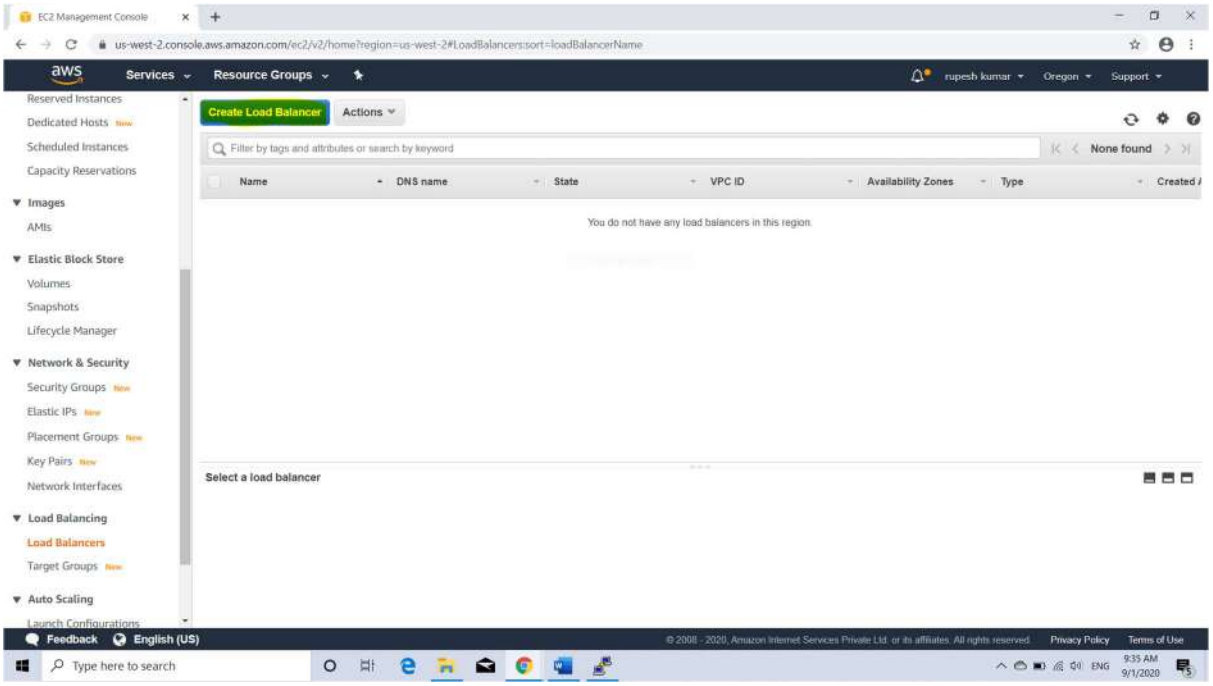


Verify Output of Web Server two

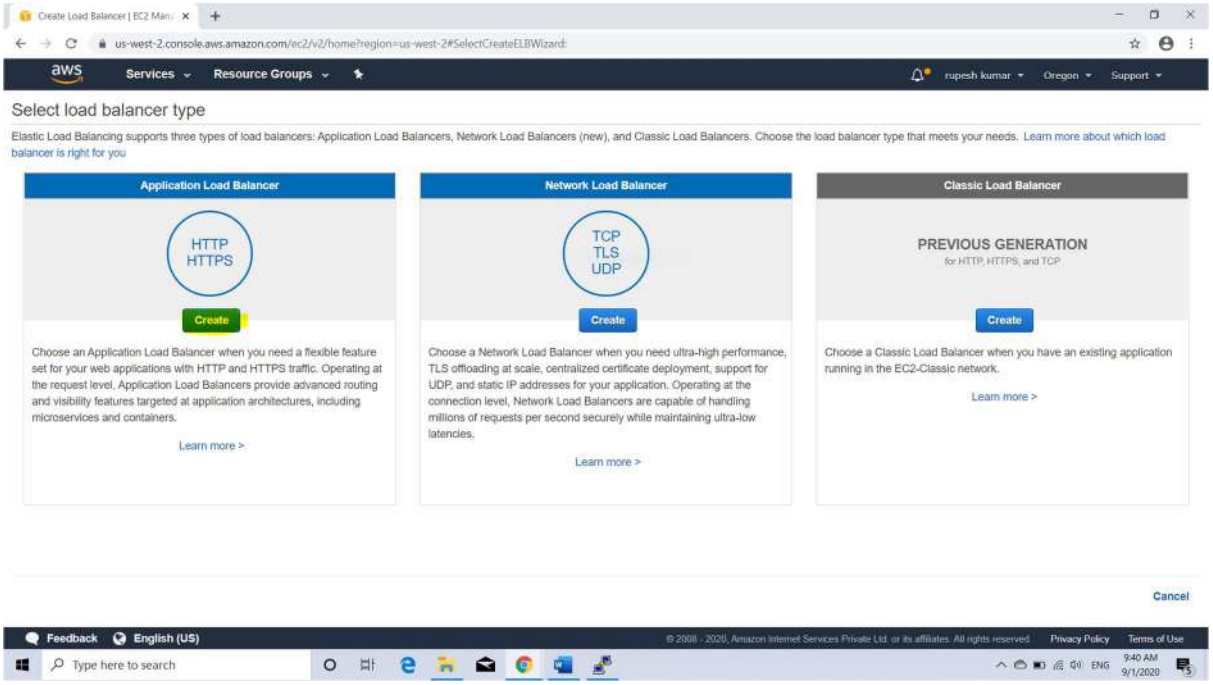


3)To configure Elastic Load Balancer.

Open the AWS console, On EC2 dashboard panel
Expanding **"Load Balancing"**
Select **"Load Balancer"**
Click on **"Create Load Balancer button"**

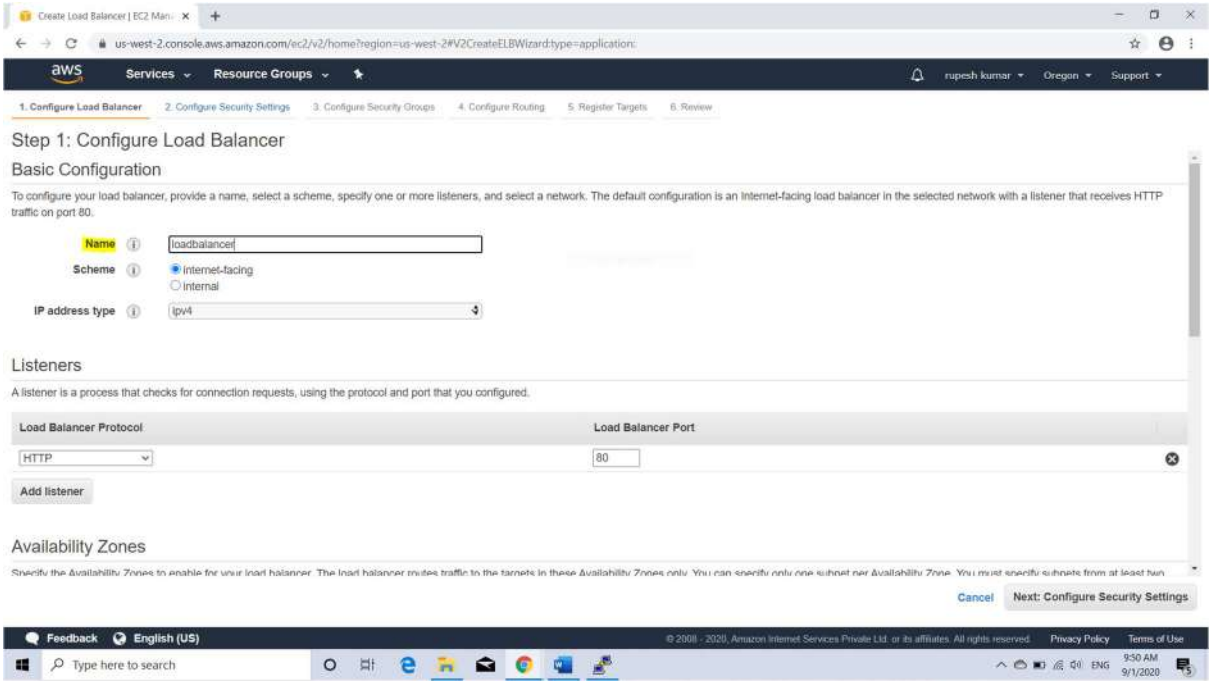


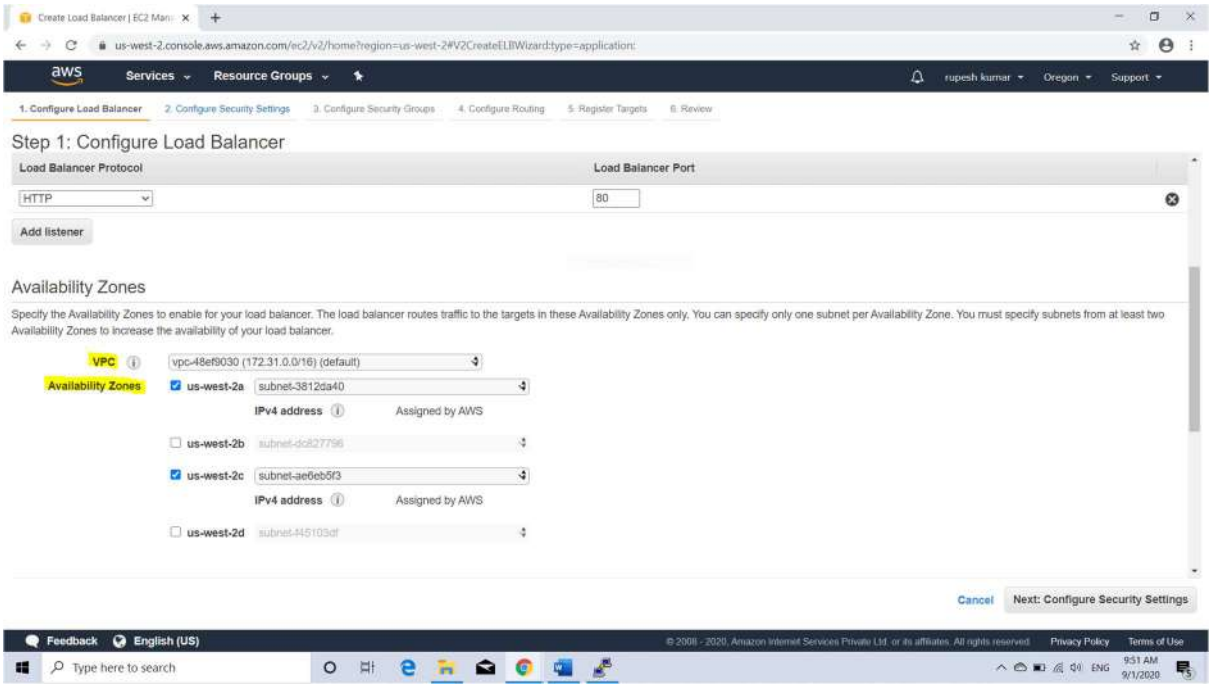
Click on create load balancer button, you'll see types of load balancers and select your required type by clicking on create button.



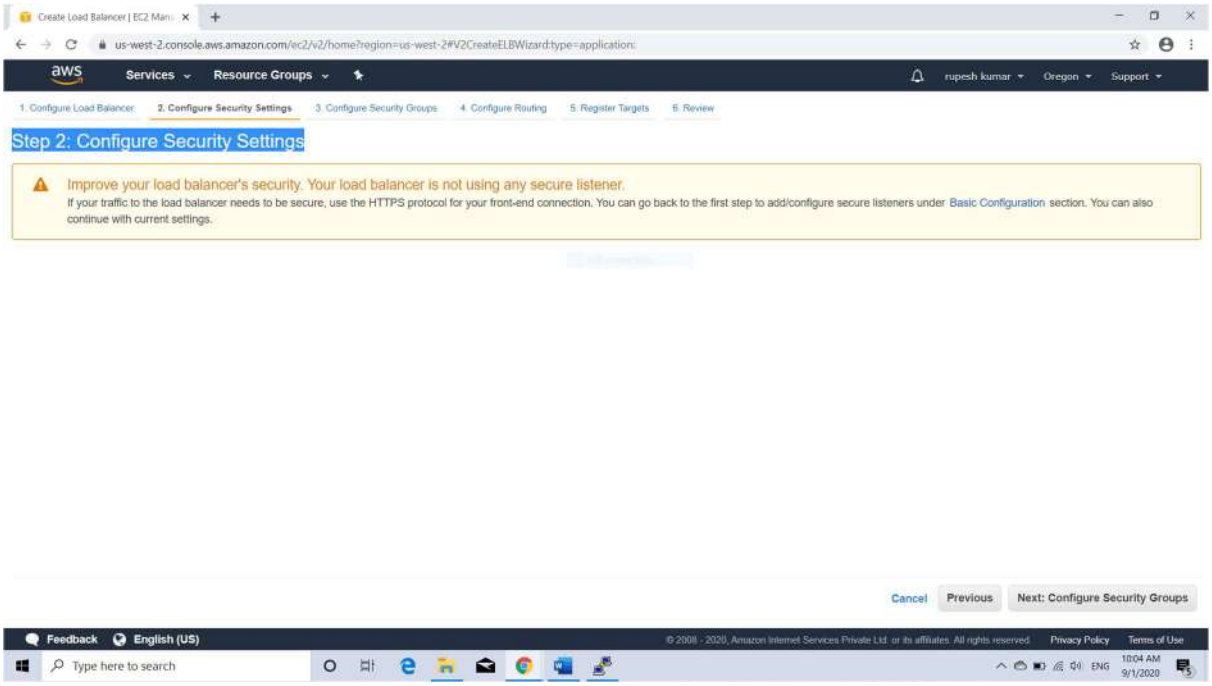
Step 1: Configure Load Balancer

Assign a name for the load balancer, scroll down to last, select VPC and availability zones. Make sure that load balancer and instances must be in same VPC and click on next: configure security settings



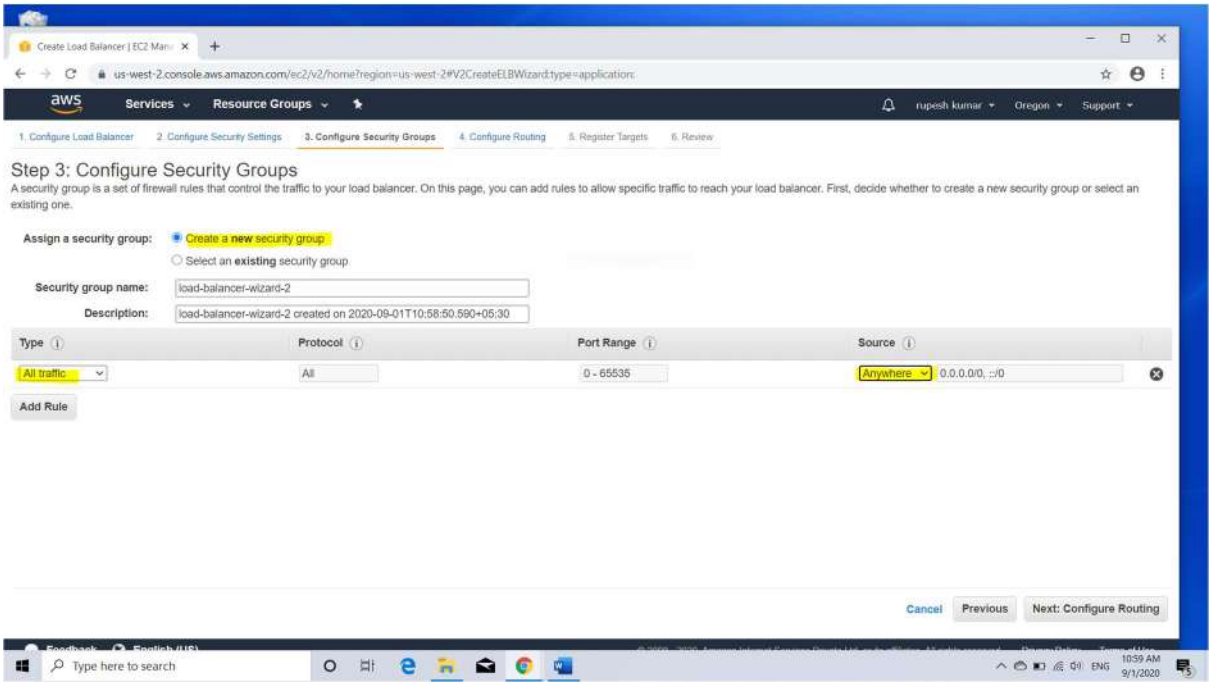


Step 2: Configure Security Settings



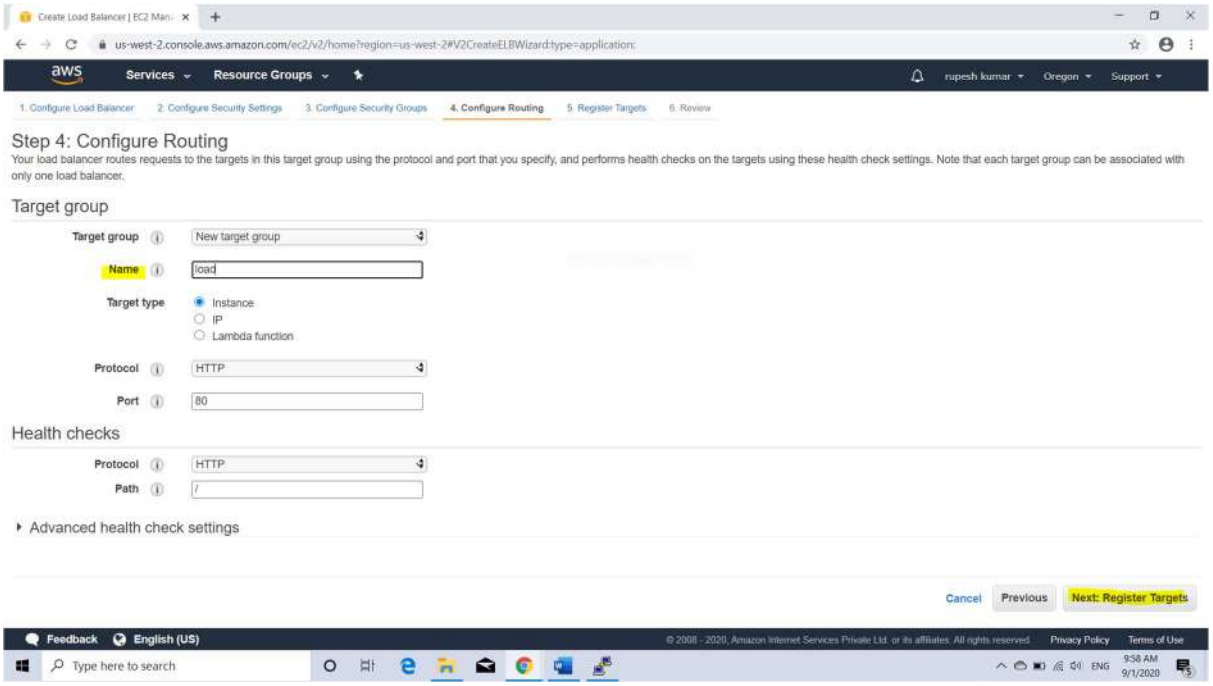
Step 3: Configure Security Groups

A security group is a set of firewall rules that control the traffic to your load balancer. On this page, you can add rules to allow specific traffic to reach your load balancer. First, decide whether to create a new security group or select an existing one.



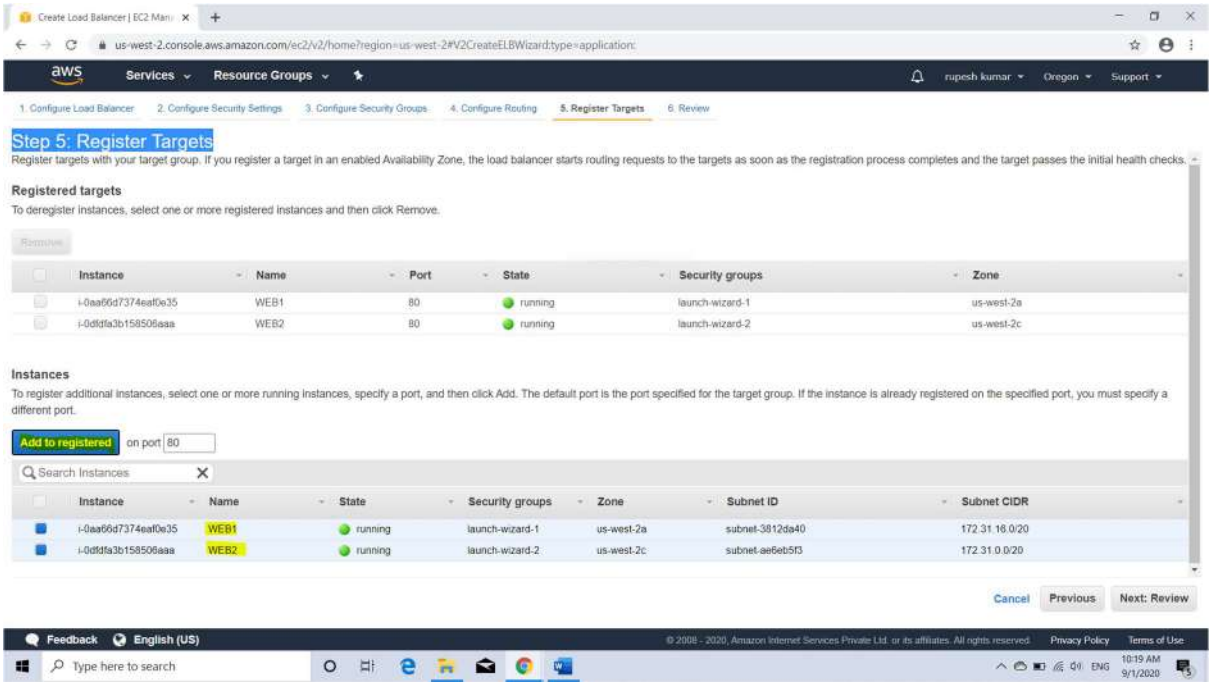
Step 4: Configure Routing

Click on next: configure routing assign a name for the target group and click on next: register targets. Check if there are any registered targets, you'll see no instances available



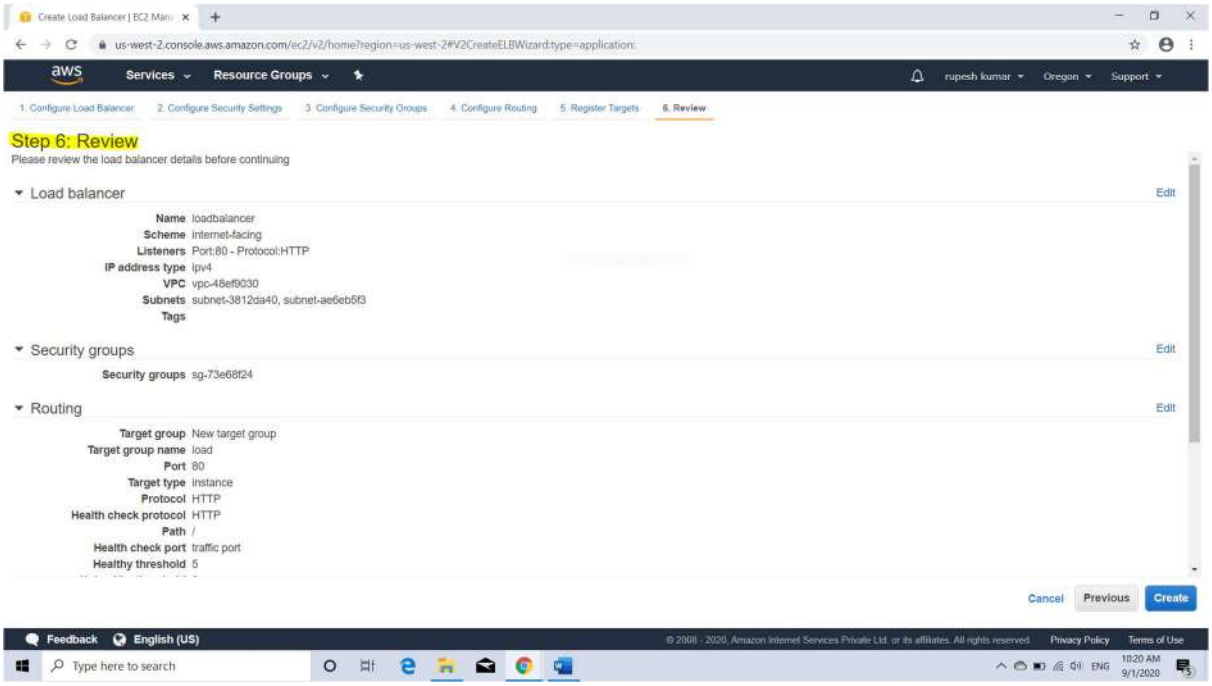
Step 5: Register Targets

Select the servers that you want to perform the load balancing and click on add to registered now you'll find registered targets and click on next.

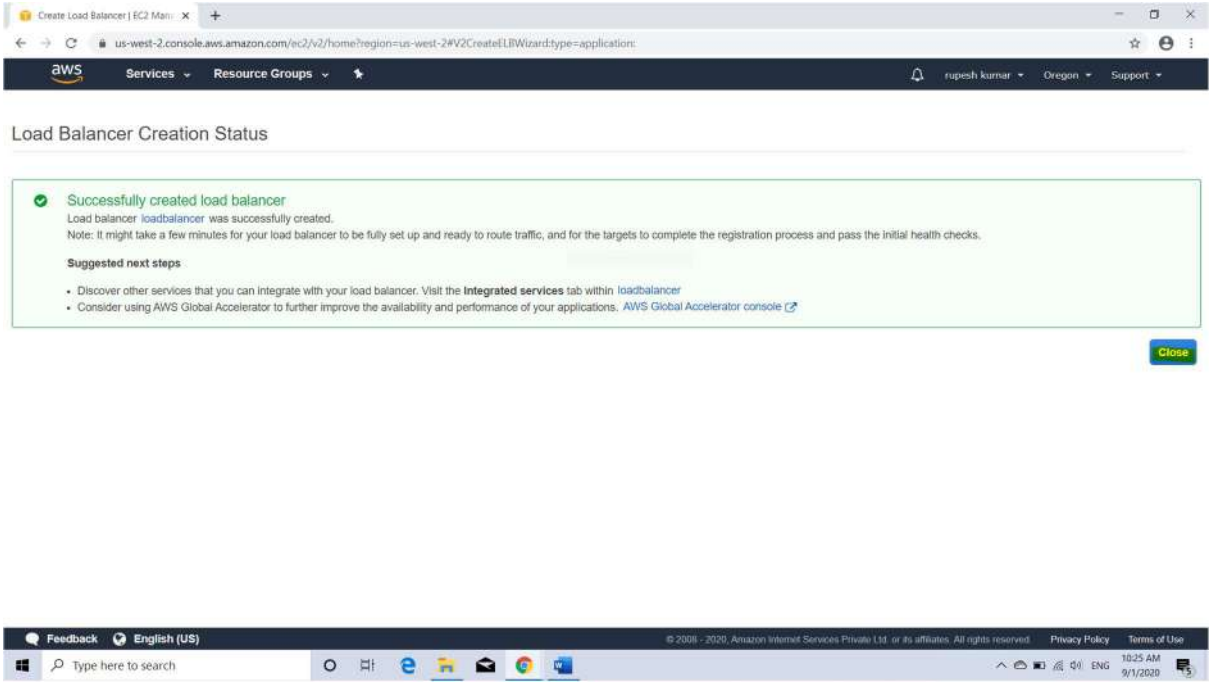


Step 6: Review

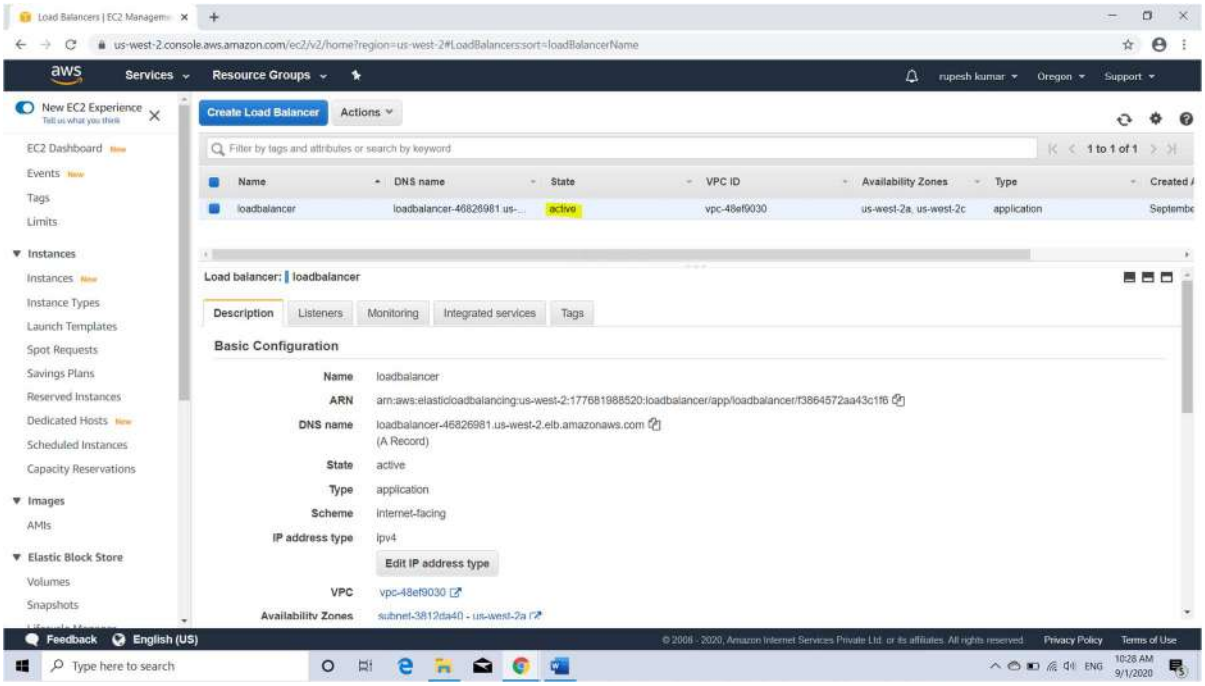
Review and click on create button.



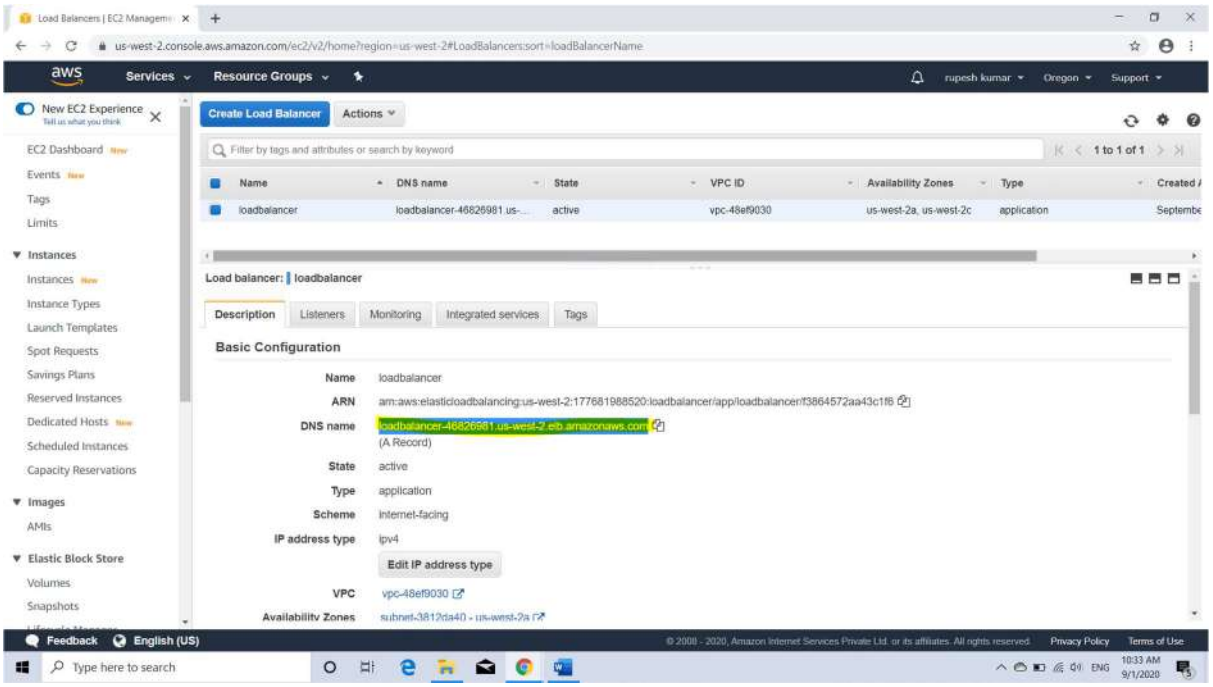
You'll see a message as successfully created load balancer and click on close button



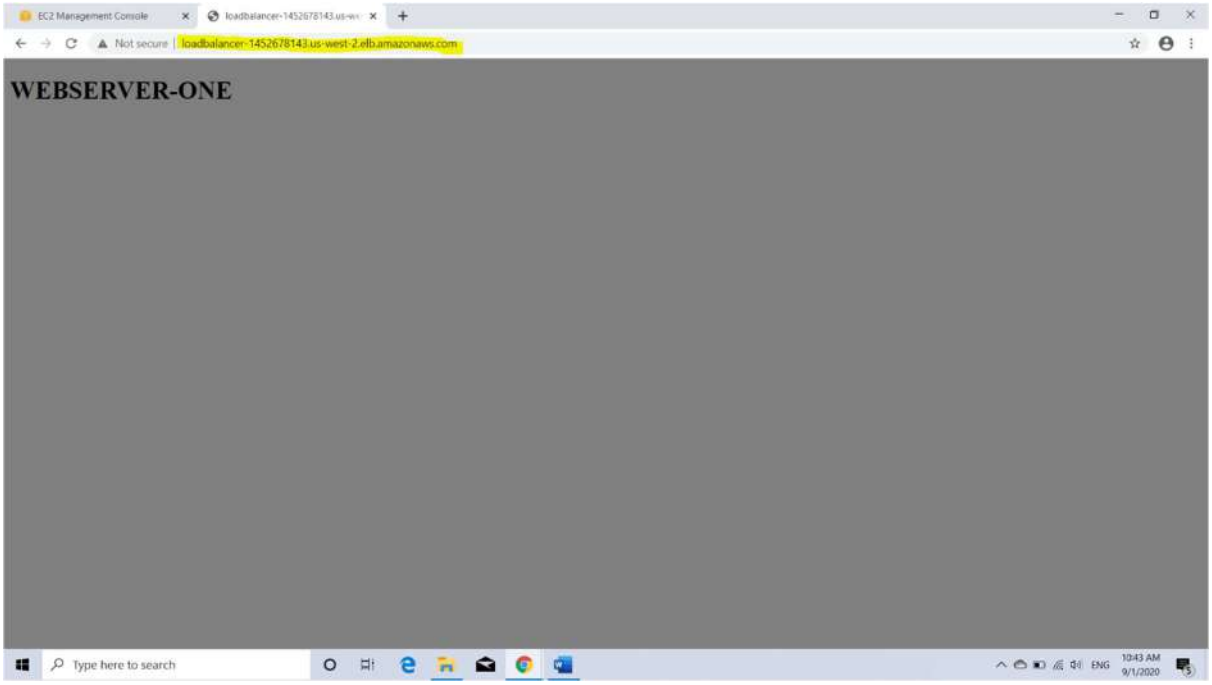
Check the status of the load balancer and it is in provisioning state. After few minutes it'll changed to active state.



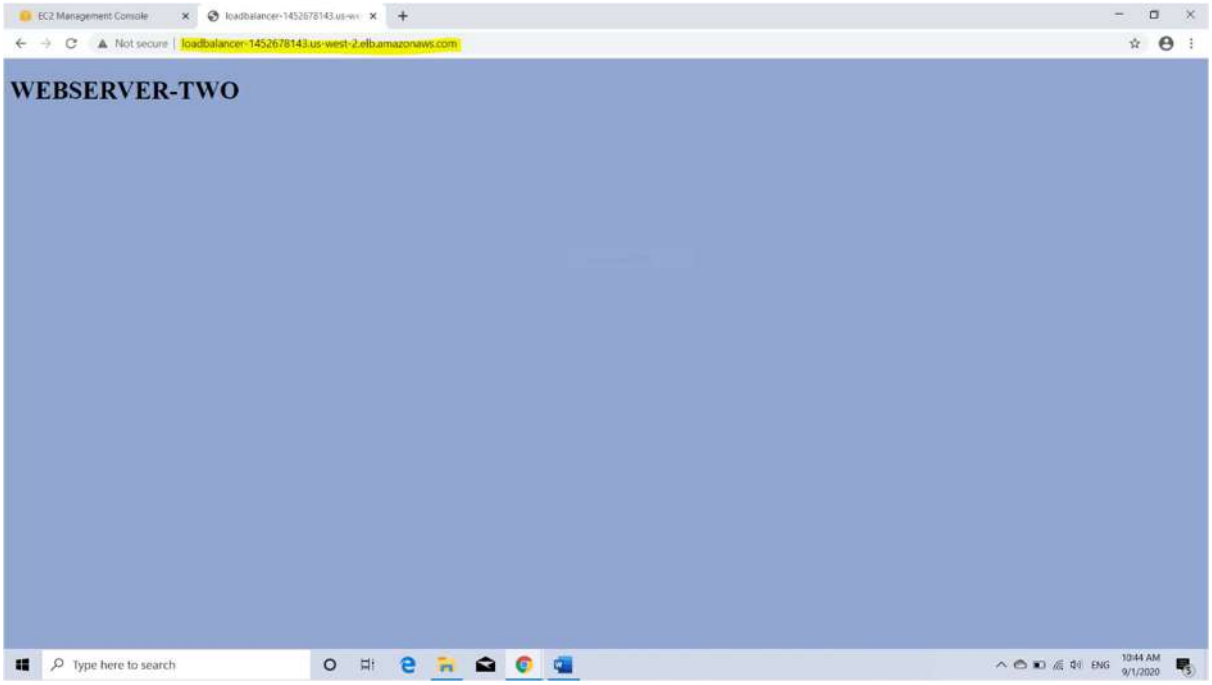
Now under the description tab, you'll find a DNS name for your load balancer copy and paste it in new tab.



In Browser type Load Balancer DNS names
Verify website by frequently refreshing browser (press F5)



On each refresh one by one, webserver1 and webserver2 will be displayed



If you got this output, **Congratulation your ELB configuration is successful.**