

Project 2(a): Generate a Classical load Balancer with 3 different web servers:

1. Apache

2. Apache 2

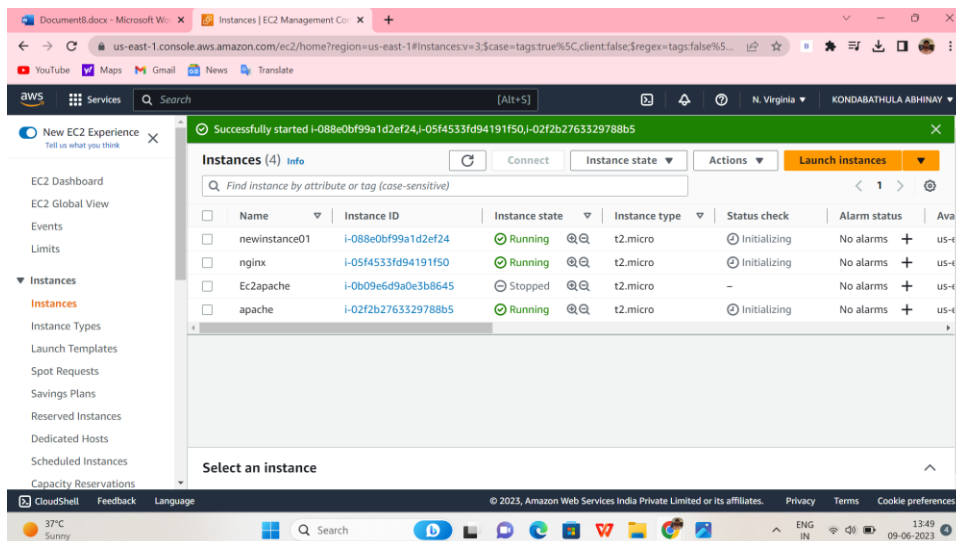
3. Nginx

Step 1: Launch an Ec2 instance and install Apache web server in it which is our last project.

Step 2: Launch another instance with Apache 2 web server

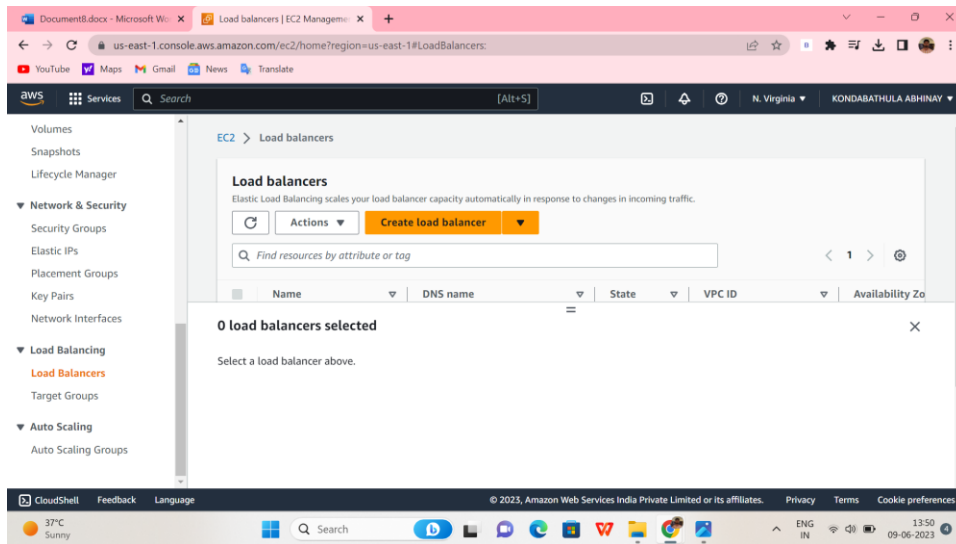
Step 3: Launch another and install NGINX webserver in it.

Commands: connect to ssh --> sudo -l --> yum update --> yum install nginx --> systemctl start nginx --> take the Public ip address and check in chrome.



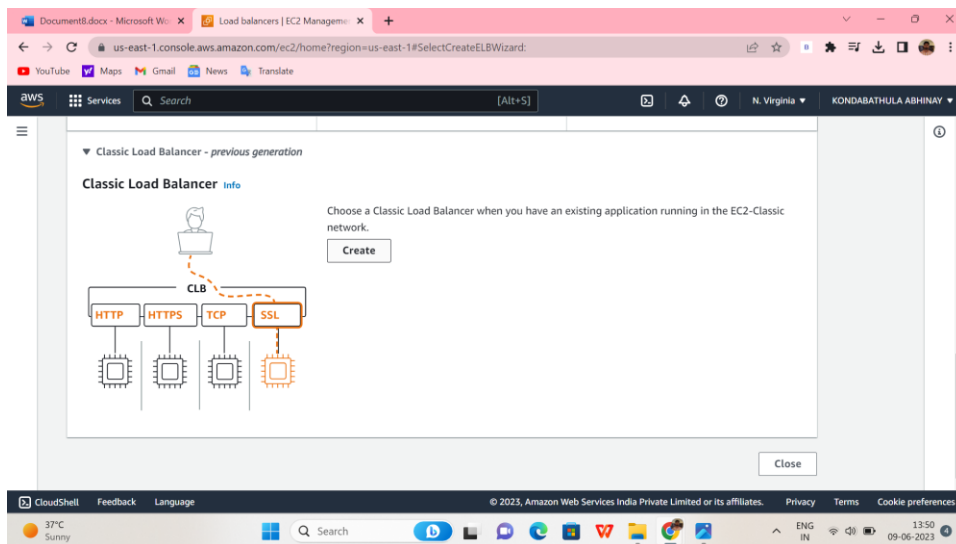
Step 4: Make sure that all the instances having the port 80 in inbound rules.

Step 5: Go to search bar and search for “LoadBalancer” and select it



Step6: Click on the “create Load Balancer”

Step 7: Select the “Classic Load balancer” which is in the last of the list.



Step 8: Give a name to your group as “Load balancer 1” and click next.

Document1.docx - Microsoft Wi... Create Load Balancer | EC2 Man... +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateELBWizard:

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 1: Define Load Balancer

Basic Configuration

This wizard will walk you through setting up a new load balancer. Begin by giving your new load balancer a unique name so that you can identify it from other load balancers you might create. You will also need to configure ports and protocols for your load balancer. Traffic from your clients can be routed from any load balancer port to any port on your EC2 instances. By default, we've configured your load balancer with a standard web server on port 80.

Load Balancer name:

Create LB inside:

Create an internal load balancer: ☐ (what's this?)

Enable advanced VPC configuration: ☐

Listener Configuration:

Load Balancer Protocol	Load Balancer Port	Instance Protocol	Instance Port
HTTP	80	HTTP	80

Cancel Next: Assign Security Groups

CloudShell Feedback Language © 2023, Amazon Web Services India Private Limited or its affiliates. Privacy Terms Cookie preferences

37°C Sunny Search 13:50 09-06-2023

Step 9: Create a new security group and name it as “Load Balancer 1”

Document1.docx - Microsoft Wi... Create Load Balancer | EC2 Man... +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateELBWizard:

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 2: Assign Security Groups

You have selected the option of having your Elastic Load Balancer inside of a VPC, which allows you to assign security groups to your load balancer. Please select the security groups to assign to this load balancer. This can be changed at any time.

Assign a security group: ☒ Create a new security group ☐ Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source
Custom TCP F	TCP	80	Custom 0.0.0.0/0

Add Rule

Cancel Previous Next: Configure Security Settings

CloudShell Feedback Language © 2023, Amazon Web Services India Private Limited or its affiliates. Privacy Terms Cookie preferences

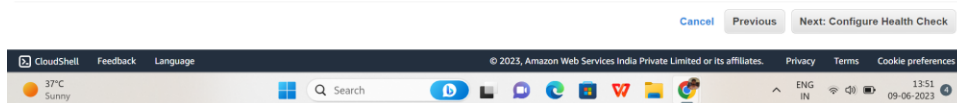
37°C Sunny Search 13:51 09-06-2023

Step 10: Click next two times and now select the instances you just created with 3 different web servers



Step 3: Configure Security Settings

⚠ Improve your load balancer's security. Your load balancer is not using any secure listener.
If your traffic to the load balancer needs to be secure, use either the HTTPS or the SSL protocol for your front-end connection. You can go back to the first step to add/configure secure listeners under **Basic Configuration** section. You can also continue with current settings.



Click “next”



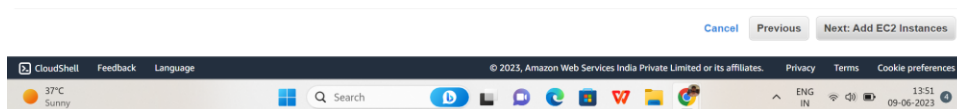
Step 4: Configure Health Check

Your load balancer will automatically perform health checks on your EC2 instances and only route traffic to instances that pass the health check. If an instance fails the health check, it is automatically removed from the load balancer. Customize the health check to meet your specific needs.

Ping Protocol
Ping Port
Ping Path

Advanced Details

Response Timeout seconds
Interval seconds
Unhealthy threshold
Healthy threshold



Document8.docx - Microsoft Word | Create Load Balancer | EC2 Man... | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateELBWizard:

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 5: Add EC2 Instances

The table below lists all your running EC2 Instances. Check the boxes in the Select column to add those instances to this load balancer.

VPC vpc-019f98b8aa2d9c4b8 (172.31.0.0/16)

<input type="checkbox"/>	Instance	Name	State	Security groups	Zone	Subnet ID	Subnet CIDR
<input checked="" type="checkbox"/>	i-088e0bf9a1d2ef24	newinstance01	running	launch-wizard-7	us-east-1c	subnet-094e392...	172.31.80.0/20
<input checked="" type="checkbox"/>	i-054533fd94191f50	nginx	running	launch-wizard-9	us-east-1c	subnet-094e392...	172.31.80.0/20
<input type="checkbox"/>	i-0b09e6d9a0e3b8645	Ec2apache	stopped	launch-wizard-5	us-east-1c	subnet-094e392...	172.31.80.0/20
<input checked="" type="checkbox"/>	i-02f2b2763329788b5	apache	running	launch-wizard-8	us-east-1c	subnet-094e392...	172.31.80.0/20

Availability Zone Distribution
3 instances in us-east-1c

Cancel Previous Next: Add Tags

CloudShell Feedback Language © 2023, Amazon Web Services India Private Limited or its affiliates. Privacy Terms Cookie preferences

37°C Sunny Search ENG IN 13:51 09-06-2023

Step 11: create a tag and name it as “Load Balancer 1” and click on “Create”.

Document8.docx - Microsoft Word | Create Load Balancer | EC2 Man... | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateELBWizard:

1. Define Load Balancer 2. Assign Security Groups 3. Configure Security Settings 4. Configure Health Check 5. Add EC2 Instances 6. Add Tags 7. Review

Step 6: Add Tags

Apply tags to your resources to help organize and identify them.

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver. [Learn more](#) about tagging your Amazon EC2 resources.

Key	Value
LoadBalancer1	LoadBalancer1

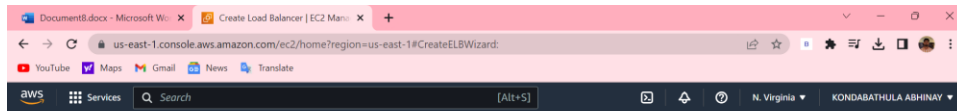
Create Tag

Cancel Previous Review and Create

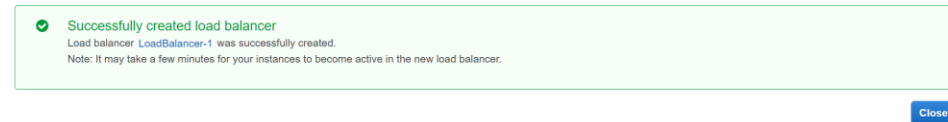
CloudShell Feedback Language © 2023, Amazon Web Services India Private Limited or its affiliates. Privacy Terms Cookie preferences

37°C Sunny Search ENG IN 13:52 09-06-2023

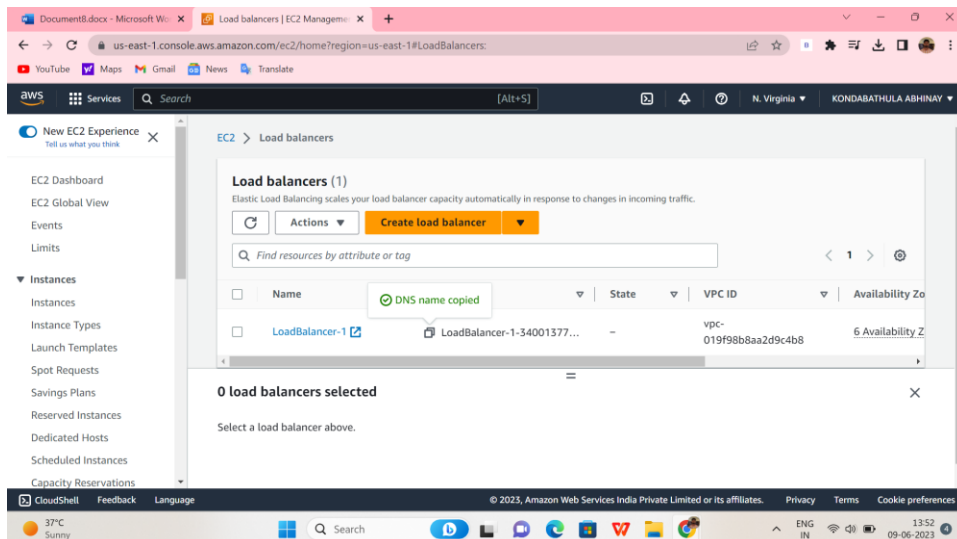
Step 12: you will find your load balancer created.



Load Balancer Creation Status



Now just copy the DNS and paste it in the chrome page .



Step 13: refresh the pages simultaneously so the load on the server and then it jumps to other server

---- you can find my [Demonstration Video of Load Balancer.](#)