

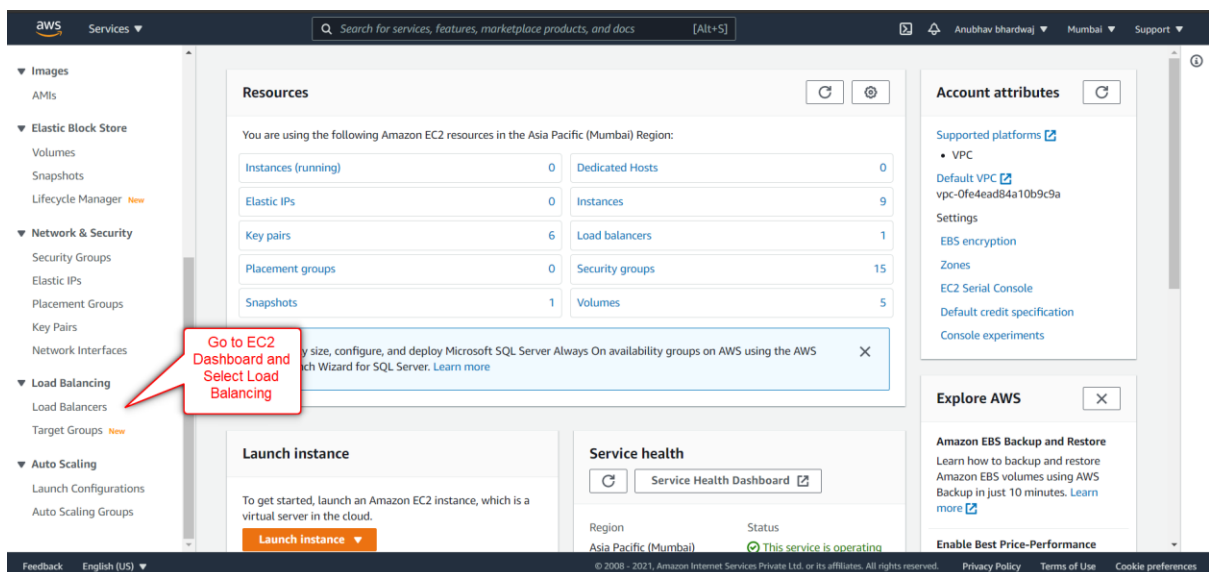
Setup Autoscaling infrastructure with ELB and scale up /down on scheduled time as well on CPU > 5%

Overview

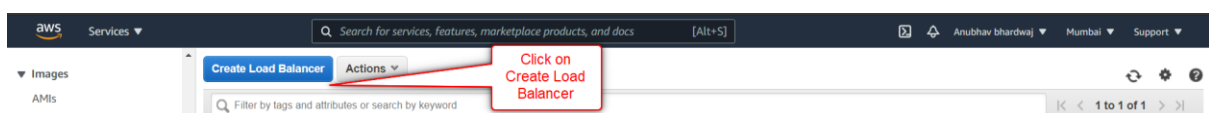
First We will Create a Load Balancer and after Creating ELB we attach a Instance to it and then move to Create a Autoscaling Group and attach it with Newly Created ELB and set up a Constrain When Load Utilization is CPU > 5% it will automatic setup the New Instance with same configuration.

1. Crating a ELB

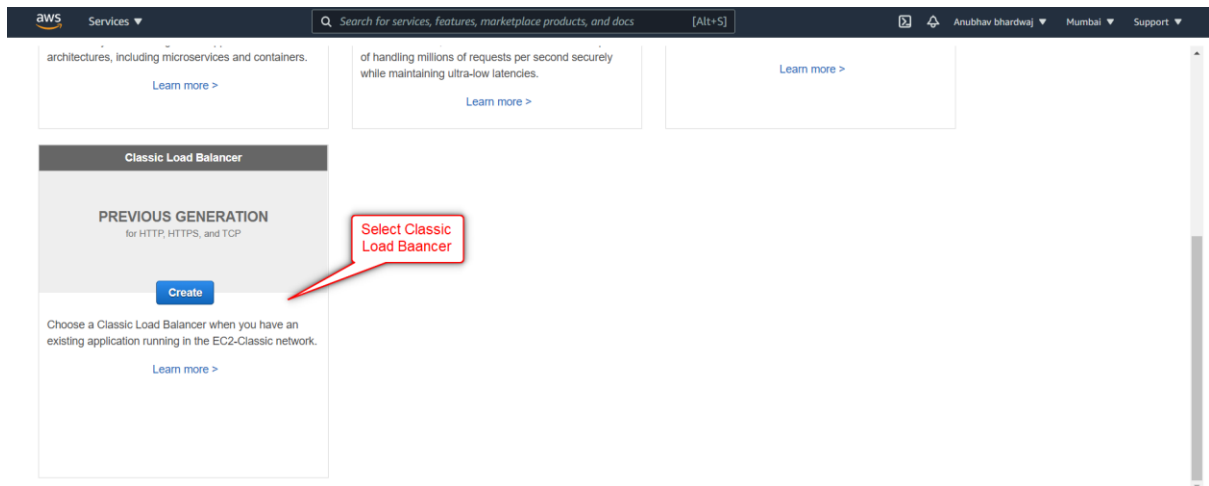
➤ Move to EC2 Dashboard and Click on Load Balancing



➤ Click on load Balancer

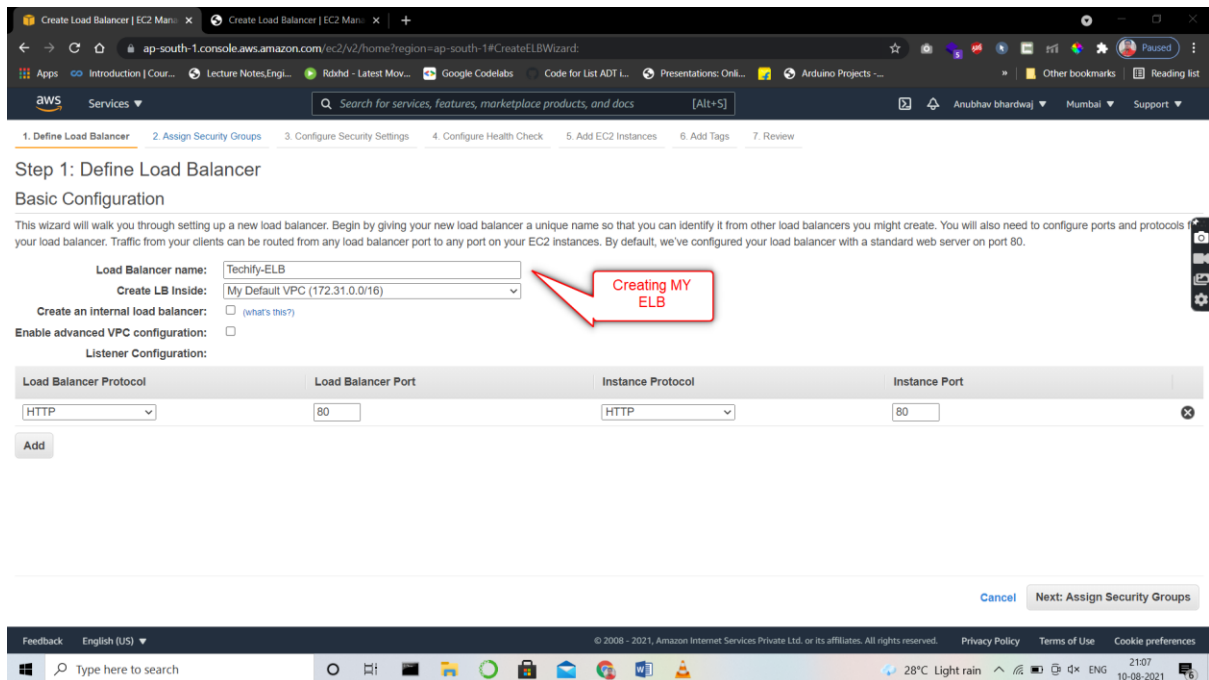


➤ Select Classic Load Balancer



➤ Specify the Details

- **Name Load Balancer:** Specify the Name
- **Create LB Inside:** Select Default VPC



➤ Assign Security Group (Set as Default)

Create Load Balancer | EC2 Manu... x Create Load Balancer | EC2 Manu... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-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

Attached Security Group

Security Group ID	Name	Description	Actions
sg-0f0a5eb27e2dffa2	default	default VPC security group	Copy to new
sg-0f7fede3b90fc3125	launch-wizard-1	launch-wizard-1 created 2021-04-25T22:32:13.793+05:30	Copy to new
sg-0292414f81fdcf559	launch-wizard-10	launch-wizard-10 created 2021-08-10T11:44:59.894+05:30	Copy to new
sg-0f9f1713c74d71d2d	launch-wizard-2	launch-wizard-2 created 2021-04-26T09:04:58.879+05:30	Copy to new
sg-01979244cb6e6aba0	launch-wizard-4	launch-wizard-4 created 2021-07-04T17:02:43.015+05:30	Copy to new
sg-01ad5bdb559cd05de1	launch-wizard-5	launch-wizard-5 created 2021-07-31T01:39:32.224+05:30	Copy to new
sg-0f0c19cae641b39a3	launch-wizard-6	launch-wizard-6 created 2021-08-03T11:47:10.719+05:30	Copy to new
sg-0ed9e60d9b24c581b	launch-wizard-7	launch-wizard-7 created 2021-08-05T12:28:50.366+05:30	Copy to new
sg-0186113094de2341d	launch-wizard-8	launch-wizard-8 created 2021-08-06T11:58:11.821+05:30	Copy to new
sg-0f7b74bbd59ecd0ae	launch-wizard-9	launch-wizard-9 created 2021-08-09T11:58:14.850+05:30	Copy to new

Cancel Previous Next: Configure Security Settings

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➤ Configure Health Check

Create Load Balancer | EC2 Manu... x Create Load Balancer | EC2 Manu... x +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-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 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

Cancel Previous Next: Add EC2 Instances

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➤ Attach Your Instance

Instances | EC2 Management Console | Create Load Balancer | EC2 Management Console | Create Load Balancer | EC2 Management Console | +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-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-0fe4ead84a10b9c9a (172.31.0.0/16)

Instance	Name	State	Security groups	Zone	Subnet ID	Subnet CIDR
<input checked="" type="checkbox"/>	i-0b474159b7aaf1115 Jenkins Integrate	stopped	launch-wizard-4	ap-south-1a	subnet-0c3d4f65...	172.31.32.0/20
<input type="checkbox"/>	i-0a3f738447de04246	stopped	launch-wizard-5	ap-south-1a	subnet-0c3d4f65...	172.31.32.0/20
<input type="checkbox"/>	i-03069e9bec311c615 test	stopped	launch-wizard-1	ap-south-1b	subnet-02f680f6...	172.31.0.0/20
<input type="checkbox"/>	i-080ee1c12eba99b8b windowinstance	stopped	launch-wizard-2	ap-south-1b	subnet-02f680f6...	172.31.0.0/20
<input type="checkbox"/>	i-00f7e475c233177a8 terraform	stopped	default	ap-south-1b	subnet-02f680f6...	172.31.0.0/20
<input type="checkbox"/>	i-0d1175483b40d4c16 Ansible Testing	stopped	launch-wizard-7	ap-south-1b	subnet-02f680f6...	172.31.0.0/20
<input type="checkbox"/>	i-0e5e0f292187cd885 Jenkins-Master	stopped	launch-wizard-8	ap-south-1b	subnet-02f680f6...	172.31.0.0/20

Availability Zone Distribution
1 instance in ap-south-1a

☒ Enable Cross-Zone Load Balancing ⓘ

☒ Enable Connection Draining ⓘ 300 seconds

Cancel Previous Next: Add Tags

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- Add Tag
- Review and Launch

Connect to instance | EC2 Management Console | Load Balancers | EC2 Management Console | phpinfo() | techify-elb-1473444687.ap-sou... | +

ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LoadBalancers?sort=loadBalancerName

Services Search for services, features, marketplace products, and docs [Alt+S]

New EC2 Experience Tell us what you think

EC2 Dashboard

- Events
- Tags
- Limits

Instances

- Instances **New**
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances **New**
- Dedicated Hosts
- Capacity Reservations

Images

- AMIs

Elastic Block Store

- Volumes
- Snapshots

Create Load Balancer Actions

Filter by tags and attributes or search by keyword 1 to 1 of 1

Name	DNS name	State	VPC ID	Availability Zones	Type	Created
Techify-ELB	Techify-ELB-1473444687.ap-sou...	available	vpc-0fe4ead84a10b9c9a	ap-south-1a, ap-south-1b	classic	August 10, 2021

Description Instances Health check Listeners Monitoring Tags Migration

Connection Draining: Enabled, 300 seconds (Edit)

Edit Instances

Instance ID	Name	Availability Zone	Status	Actions
i-0b474159b7aaf1115	Jenkins Integrate	ap-south-1a	InService ⓘ	Remove from Load Balancer

Edit Availability Zones

Availability Zone	Subnet ID	Subnet CIDR	Instance Count	Healthy?	Actions
ap-south-1a	subnet-0c3d4f65067541007	172.31.32.0/20	1	Yes	Remove from Load Balancer
ap-south-1b	subnet-02f680f6886d7c0d3	172.31.0.0/20	0	No (Availability Zone contains no healthy targets)	Remove from Load Balancer

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Working with ELB url

PHP Version 5.4.16	
System	Linux ip-172-31-36-252.ap-south-1.compute.internal 4.14.238-182.422.amzn2.x86_64 #1 SMP Tue Jul 20 20:35:54 UTC 2021 x86_64
Build Date	Oct 31 2019 18:35:17
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc
Loaded Configuration File	/etc/php.ini
Scan this dir for additional .ini files	/etc/php.d
Additional .ini files parsed	/etc/php.d/curl.ini, /etc/php.d/fileinfo.ini, /etc/php.d/json.ini, /etc/php.d/phar.ini, /etc/php.d/zip.ini
PHP API	20100412
PHP Extension	20100525
Zend Extension	20100525
Zend Extension Build	API20100525.NTS
PHP Extension Build	API20100525.NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	disabled
Zend Memory Manager	enabled
Zend Multibyte Support	disabled
IPv6 Support	enabled
DTrace Support	disabled
Registered PHP Streams	https, ftps, compress.zlib, compress.bzip2, php, file, glob, data, http, ftp, phar, zip
Registered Stream Socket Transports	tcp, udp, unix, udg, ssl, sslv3, tls
Registered Stream Filters	zlib*, bzip2*, convert.conv*, string.rot13, string.toupper, string.tolower, string.strip_tags, convert.*, consumed, dechunk

This program makes use of the Zend Scripting Language Engine:
Zend Engine v2.4.0, Copyright (c) 1998-2013 Zend Technologies

2. Creating Autoscaling Group

➤ Launch Your Template

Name	Instance ID	Instance state	Instance type	Status check	Alarm state
Jenkins Integr...	i-0b474159b7aaf1115	Running	t2.micro	2/2 checks passed	No alarm
-	i-0fd7f38447de04246	Stopped	t2.micro	-	No alarm
test	i-03069e9bec31fc615	Stopped	t2.micro	-	No alarm
windowinstance	i-080ee1c12eba99b8b	Stopped	t2.micro	-	No alarm
terraform	i-00f7e475c233177a8	Stopped	t2.micro	-	No alarm
Ansible Testing	i-0df175483b40d4c16	Stopped	t2.micro	-	No alarm

Instance: i-0b474159b7aaf1115 (Jenkins Integrate)

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

Instance summary Info

Instance ID i-0b474159b7aaf1115 (Jenkins Integrate)	Public IPv4 address 3.108.184.227 open address	Private IPv4 addresses 172.31.36.252
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-3-108-184-227.ap-south-1.compute.amazonaws.com open address

➤ Specify the Details of Launch Template

- **Name:** Specify the Name
- **Template Version Description:** Set a version

Create launch template

Creating a launch template allows you to create a saved instance configuration that can be reused, shared and launched at a later time. Templates can have multiple versions.

Launch template name and description

Source instance
i-0b474159b7aaf1115

Launch template name - required
My-Techify_Test
Must be unique to this account. Max 128 chars. No spaces or special characters like '%', '-', '@'.

Template version description
v1
Max 255 chars

Auto Scaling guidance [Info](#)
Select this if you intend to use this template with EC2 Auto Scaling
☒ Provide guidance to help me set up a template that I can use with EC2 Auto Scaling

▶ Template tags

- **Instance Type:** Specify the Machine Type
- **Keypair Name:** Select the Key for login

Instance type [Info](#)

Instance type
t2.micro
Family: t2 1 vCPU 1 GiB Memory
On-Demand Linux pricing: 0.0124 USD per Hour
On-Demand Windows pricing: 0.017 USD per Hour
Free tier eligible [Compare instance types](#)

Key pair (login) [Info](#)
You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name
newinstance
Template value [Create new key pair](#)

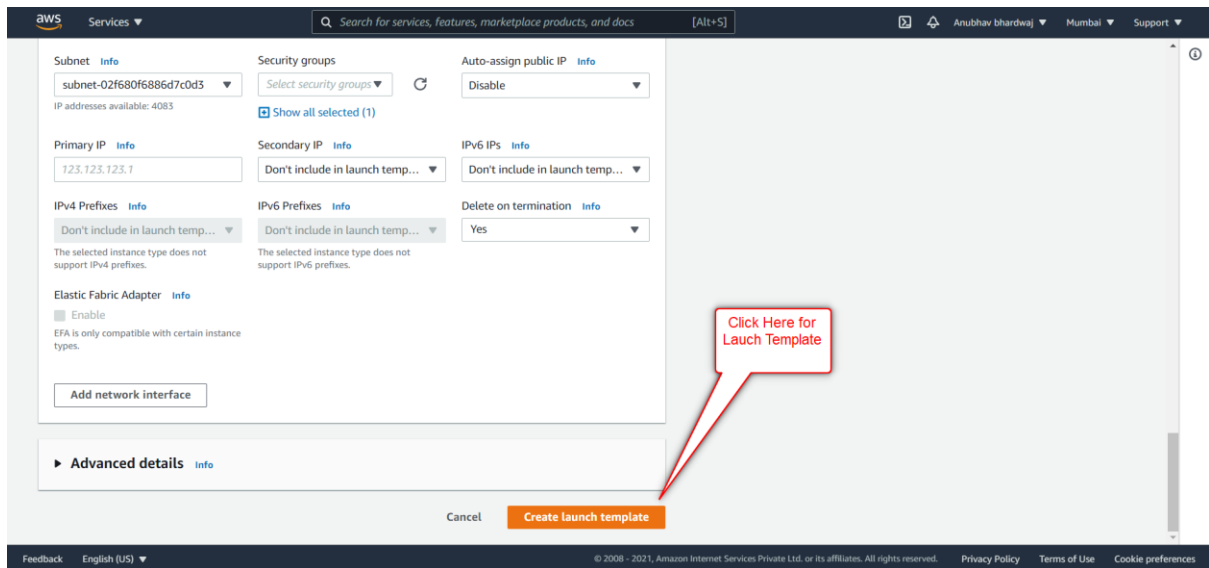
Network settings

Networking platform [Info](#)

☒ Virtual Private Cloud (VPC)
Launch into a virtual network in your own logically isolated area within the AWS Cloud

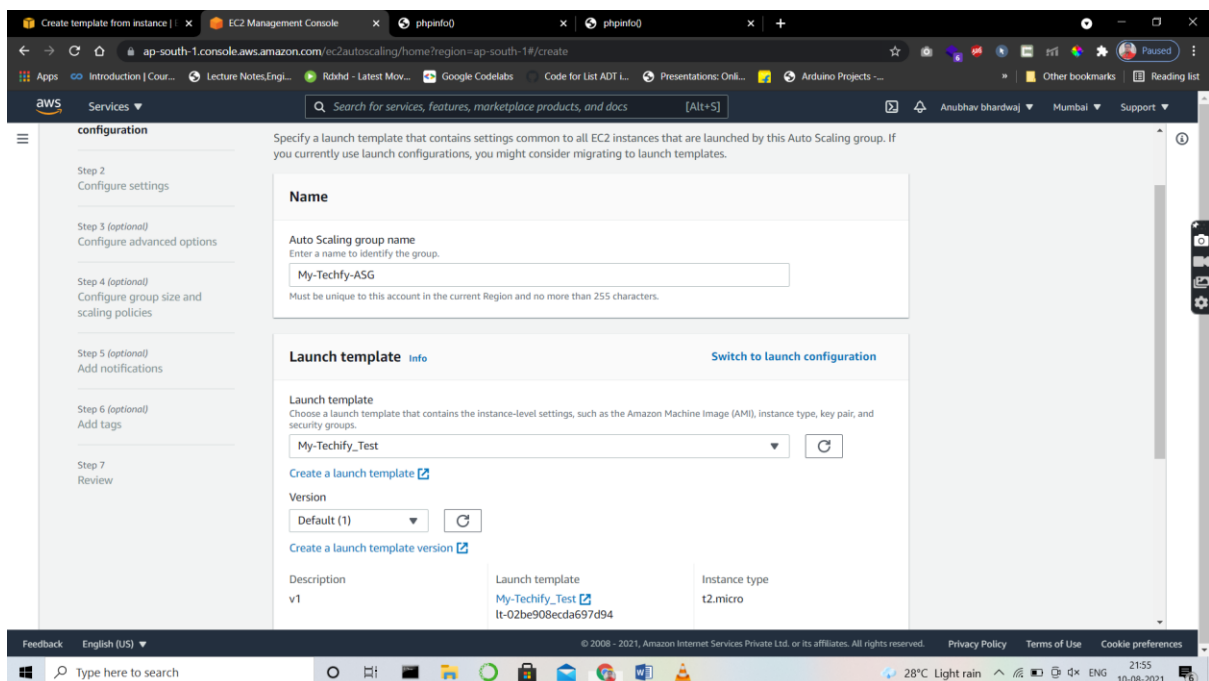
☐ EC2-Classic
Launch into a single flat network that you share with other customers.

- **Networking Setting:** Select Your Subnet
- **Click on Launch Template**

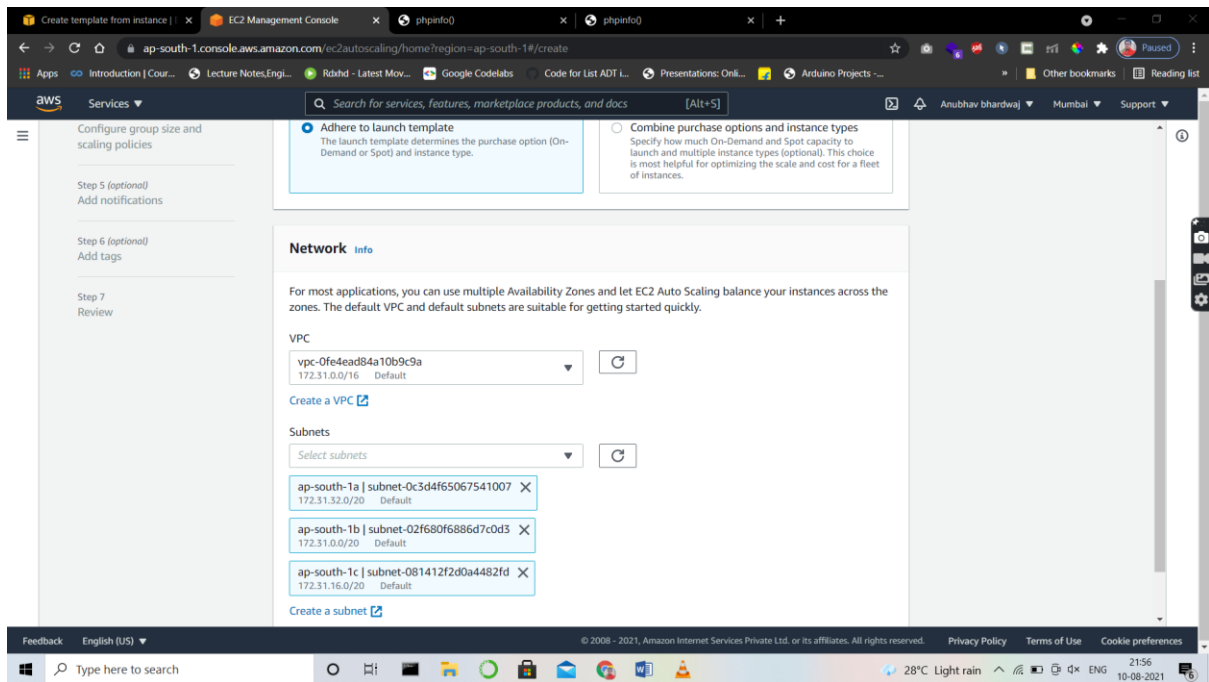


➤ Go to Autoscaling Group and Click on Create

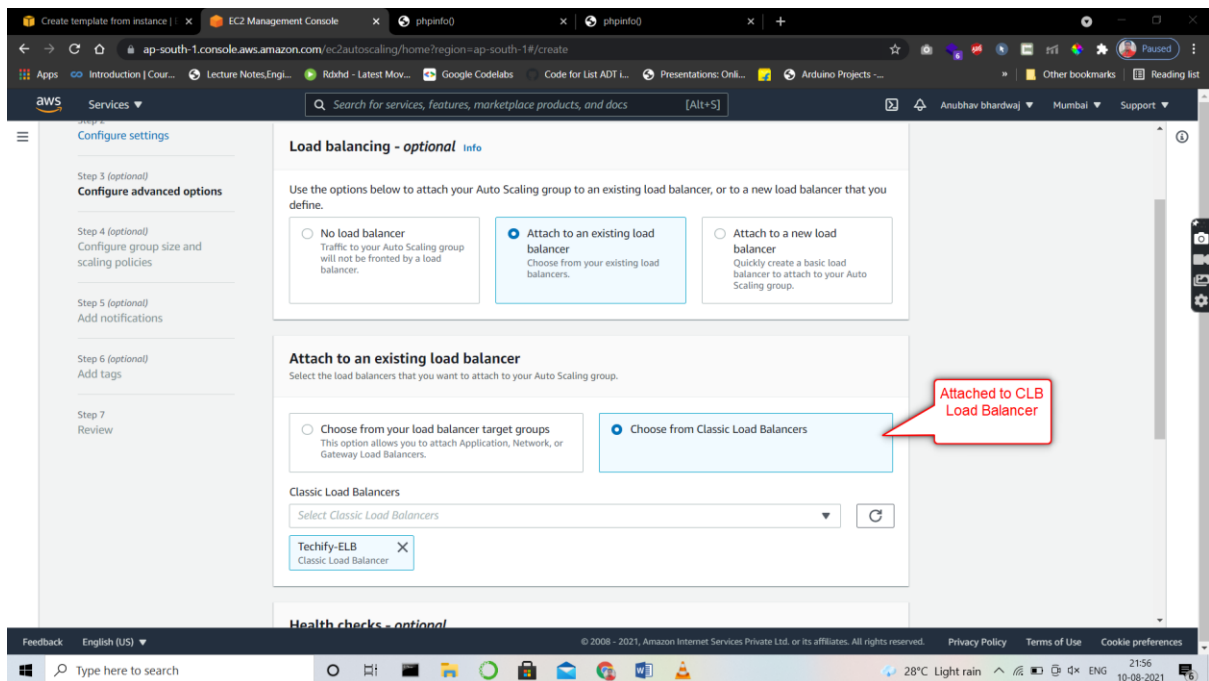
- **Name:** Specify the Name
- **Select Launch Template:** Select newly Created



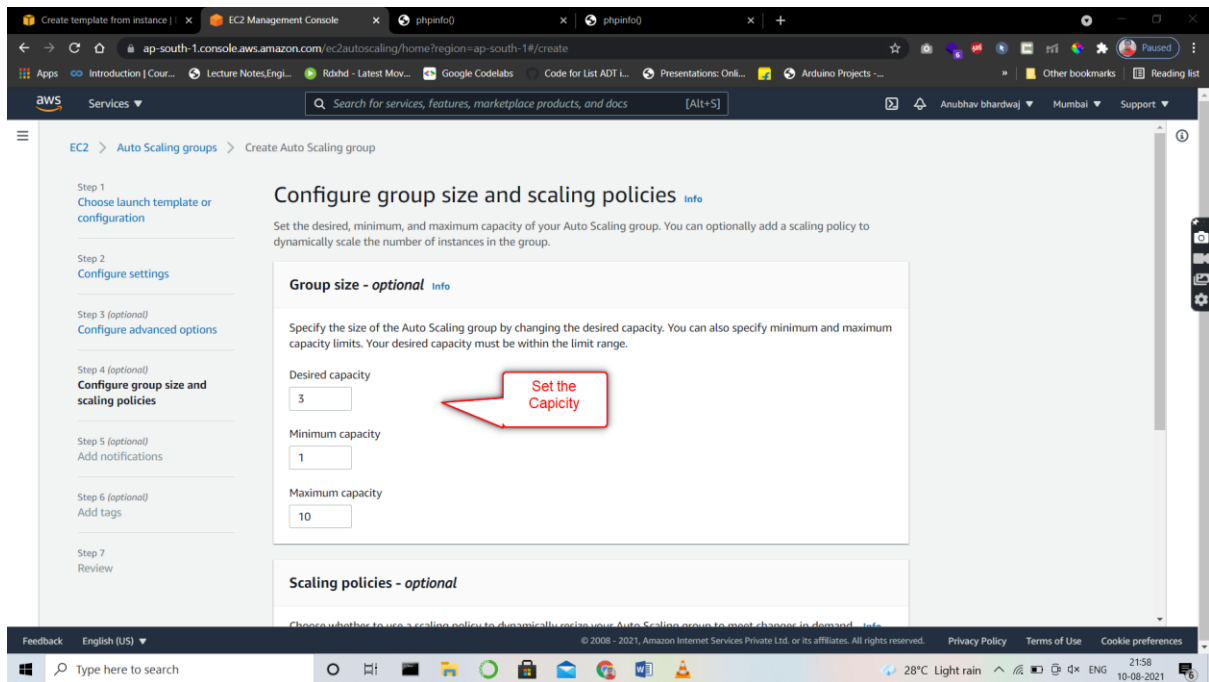
- **Configure Setting:** Select VPC and Subnet



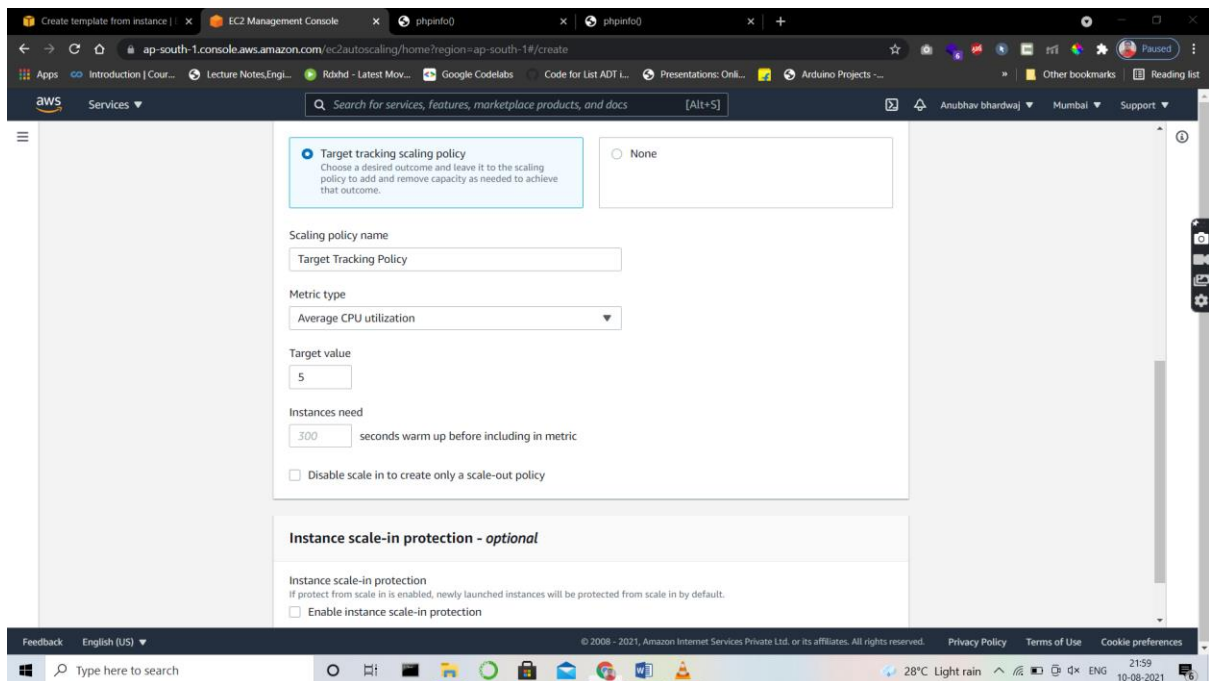
- **Attach Load Balancer:** Select Your Load Balancer



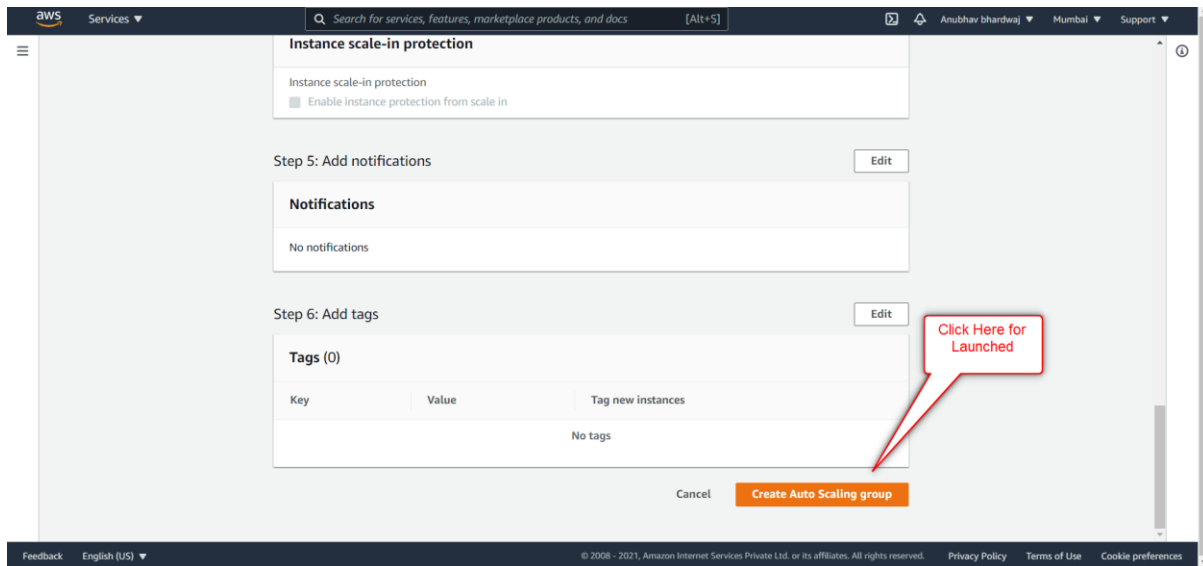
- **Group Size:** Set the no of Min and Max no of instance launched when load increases



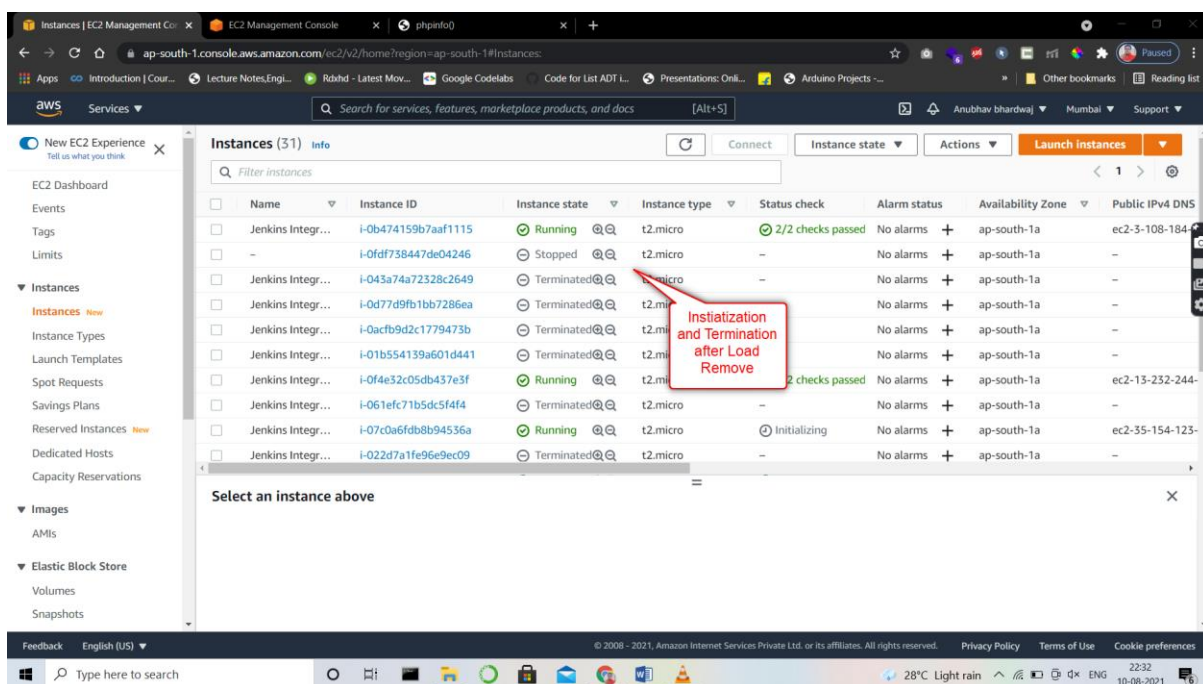
- **Scaling Policies:** Setup the Policy when new instance launch e.g (CPU utilization, Count of Request)



- **Review and Launch**



3. Go to EC-2 Dashboard and check the newly launched instance from Autoscaling Group



Thanks You