

```
root@ip-172-31-26-142:/var/www
Creating config file /etc/php/8.1/mods-available/readline.ini with new version
Setting up php8.1-opcache (8.1.2-1ubuntu2.6) ...
Creating config file /etc/php/8.1/mods-available/opcache.ini with new version
Setting up php8.1-curl (8.1.2-1ubuntu2.6) ...
update-alternatives: using /usr/bin/php8.1 to provide /usr/bin/php (php) in auto mode
update-alternatives: using /usr/bin/php8.1 to provide /usr/bin/php8 (php8) in auto mode
update-alternatives: using /usr/bin/php8.1 to provide /usr/bin/php8.1 (php8.1) in auto mode
update-alternatives: using /usr/bin/php8.1 to provide /usr/bin/php8.1 (php8.1) in auto mode
Creating config file /etc/php/8.1/cli/php.ini with new version
Setting up libapache2-mod-php8.1 (8.1.2-1ubuntu2.6) ...
Creating config file /etc/php/8.1/apache2/php.ini with new version
Module mpm_event disabled.
Enabling module mpm_prefork.
apache2_switch_mpm Switch to prefork
apache2_invoke: Enable module php8.1
Setting up php8.1 (8.1.2-1ubuntu2.6) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for php8.1-curl (8.1.2-1ubuntu2.6) ...
Processing triggers for libapache2-mod-php8.1 (8.1.2-1ubuntu2.6) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-26-142:/var/www/html# cd /
bash: cd: No such file or directory
root@ip-172-31-26-142:/var/www/html# cd /
root@ip-172-31-26-142:/var/www/html# cd /
root@ip-172-31-26-142:/var/www/html# php --version
PHP 8.1.2-1ubuntu2.6 (cli) (built: Sep 15 2022 11:30:49) (NTS)
Copyright (c) The PHP Group
Zend Engine v4.1.2, Copyright (c) Zend Technologies
with Zend OPcache v8.1.2-1ubuntu2.6, Copyright (c), by Zend Technologies
root@ip-172-31-26-142:/var/www/html# sudo systemctl restart apache2
sudo: systemctl: command not found
root@ip-172-31-26-142:/var/www/html# sudo systemctl restart apache2
root@ip-172-31-26-142:/var/www/html# echo '<?php phpinfo(); >?' | sudo tee -a /var/www/html/phpinfo.php > /dev/null
root@ip-172-31-26-142:/var/www/html# cd /var/www/html
root@ip-172-31-26-142:/var/www/html# ls -l
total 4
drwxr-xr-x 2 root root 4096 Nov  6 11:28
```

Launch an application using public ip address.



PHP Version 8.1.2-1ubuntu2.6

System	Linux ip-172-31-26-142 5 15 0-1019-aws #23-Ubuntu SMP Wed Aug 17 18:33:13 UTC 2022 x86_64
Build Date	Sep 15 2022 11:30:49
Build System	Linux
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/8.1/apache2
Loaded Configuration File	/etc/php/8.1/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/8.1/apache2/conf.d
Additional .ini files parsed	/etc/php/8.1/apache2/conf.d/10-opcache.ini, /etc/php/8.1/apache2/conf.d/10-pdo.ini, /etc/php/8.1/apache2/conf.d/20-calendar.ini, /etc/php/8.1/apache2/conf.d/20-ctype.ini, /etc/php/8.1/apache2/conf.d/20-exif.ini, /etc/php/8.1/apache2/conf.d/20-fileinfo.ini, /etc/php/8.1/apache2/conf.d/20-ftp.ini, /etc/php/8.1/apache2/conf.d/20-gettext.ini, /etc/php/8.1/apache2/conf.d/20-gd.ini, /etc/php/8.1/apache2/conf.d/20-gopher.ini, /etc/php/8.1/apache2/conf.d/20-iconv.ini, /etc/php/8.1/apache2/conf.d/20-imagick.ini, /etc/php/8.1/apache2/conf.d/20-ldap.ini, /etc/php/8.1/apache2/conf.d/20-mbstring.ini, /etc/php/8.1/apache2/conf.d/20-mcrypt.ini, /etc/php/8.1/apache2/conf.d/20-mysqlnd.ini, /etc/php/8.1/apache2/conf.d/20-sockets.ini, /etc/php/8.1/apache2/conf.d/20-sysvmsg.ini, /etc/php/8.1/apache2/conf.d/20-sysvsem.ini, /etc/php/8.1/apache2/conf.d/20-sysvshm.ini, /etc/php/8.1/apache2/conf.d/20-tokenizer.ini
PHP API	20210902
PHP Extension	20210902
Zend Extension	420210902
Zend Extension Build	API20210902.NTS
PHP Extension Build	API20210902.NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	enabled
Zend Memory Manager	enabled

Now create an image from the instance.

Instances (1/4) Info

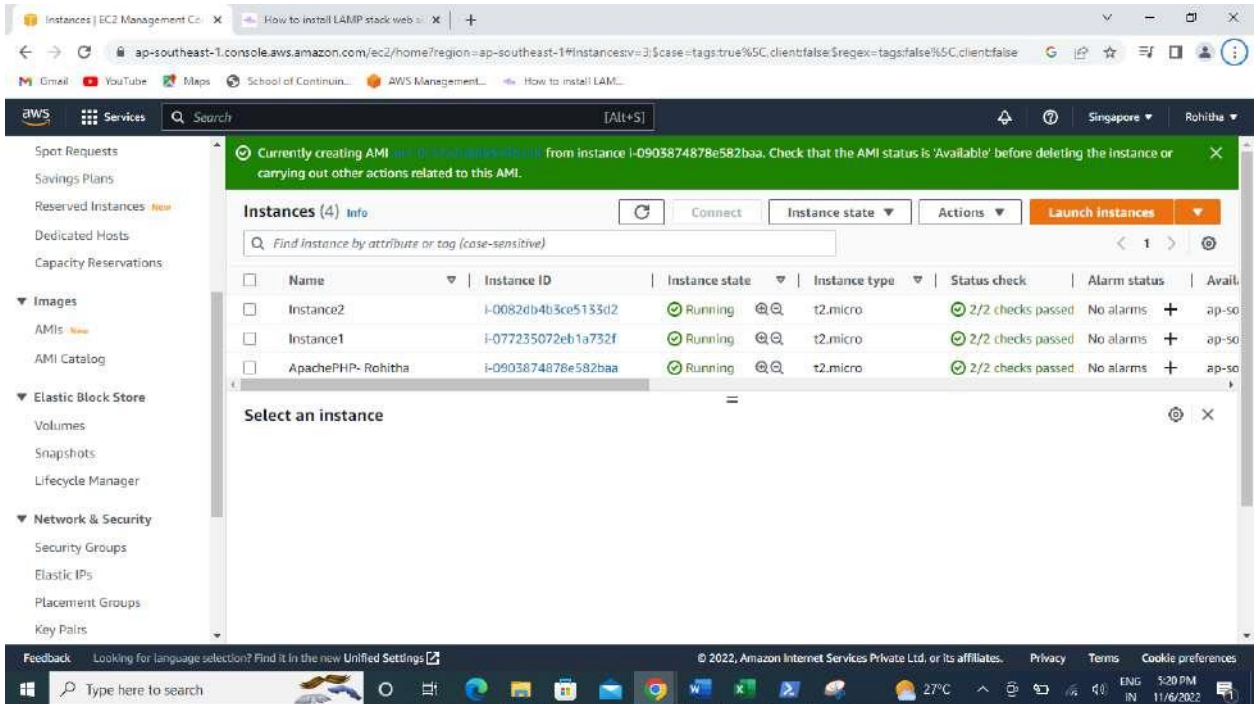
Name	Instance ID	Instance state	Instance type
Instance2	i-0082cb4b3ce5133d2	Running	t2.micro
Instance1	i-077235072eb1a752f	Running	t2.micro
ApachePHP-Rohitha	i-0903874878e582baa	Running	t2.micro
Rohitha	i-0a3f7a3c35fb713f0	Running	t2.micro

Instance: i-0903874878e582baa (ApachePHP-Rohitha)

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

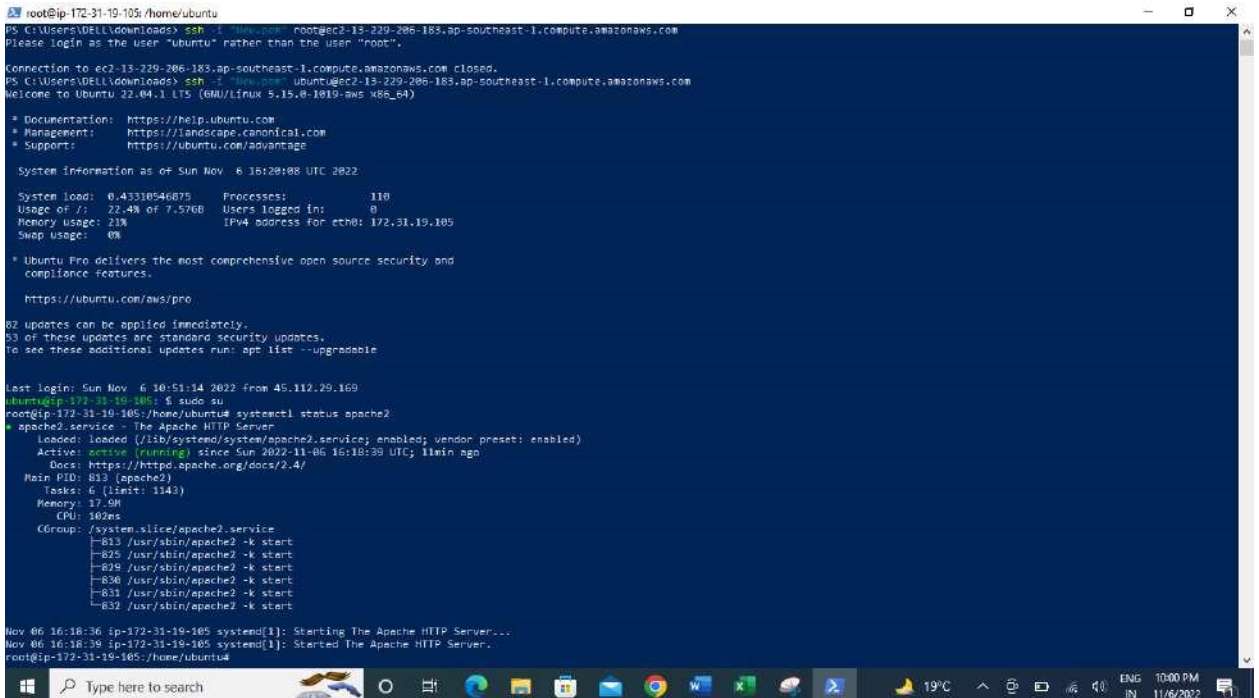
Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0903874878e582baa (ApachePHP-Rohitha)	54.255.155.254   open address	172.31.26.142
IPv6 address	Instance state	Public IPv4 DNS
-	Running	ec2-54-255-155-254.ap-southeast-1.compute.amazonaws.com   open address



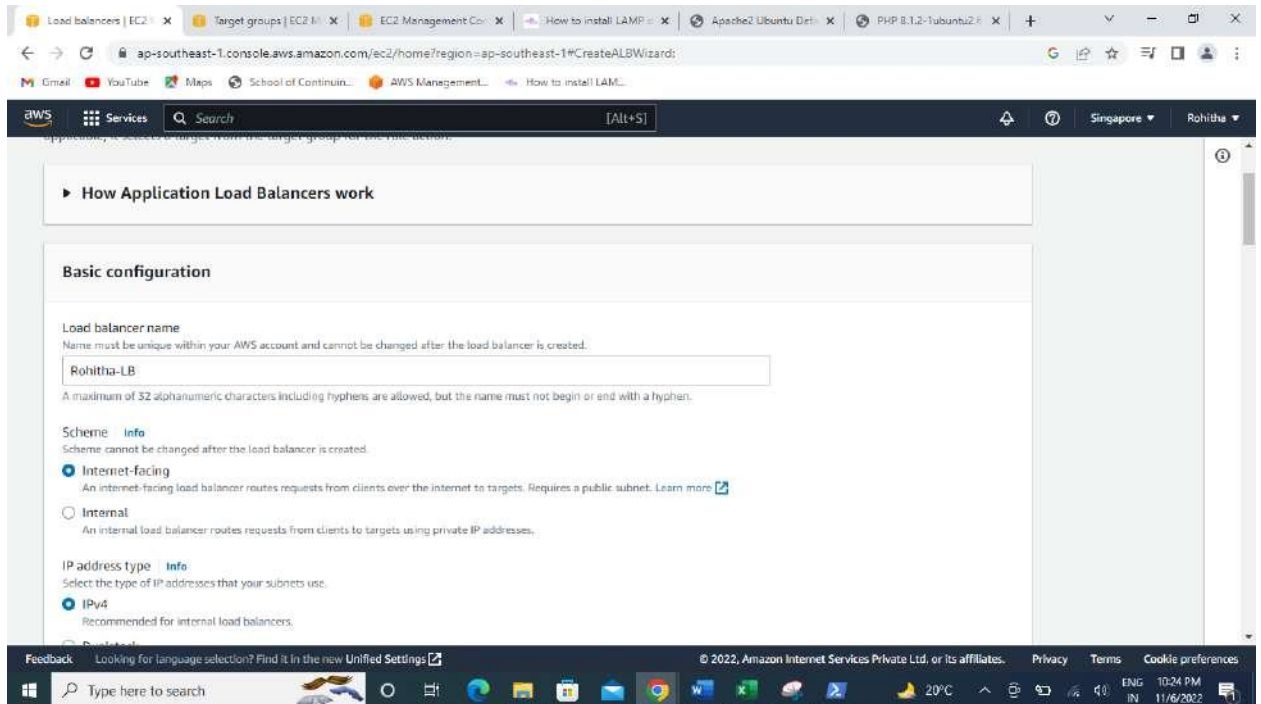
Go to AMI and select image and go to Launch instance EMI option.

Create an instance and connect to ubuntu machine.

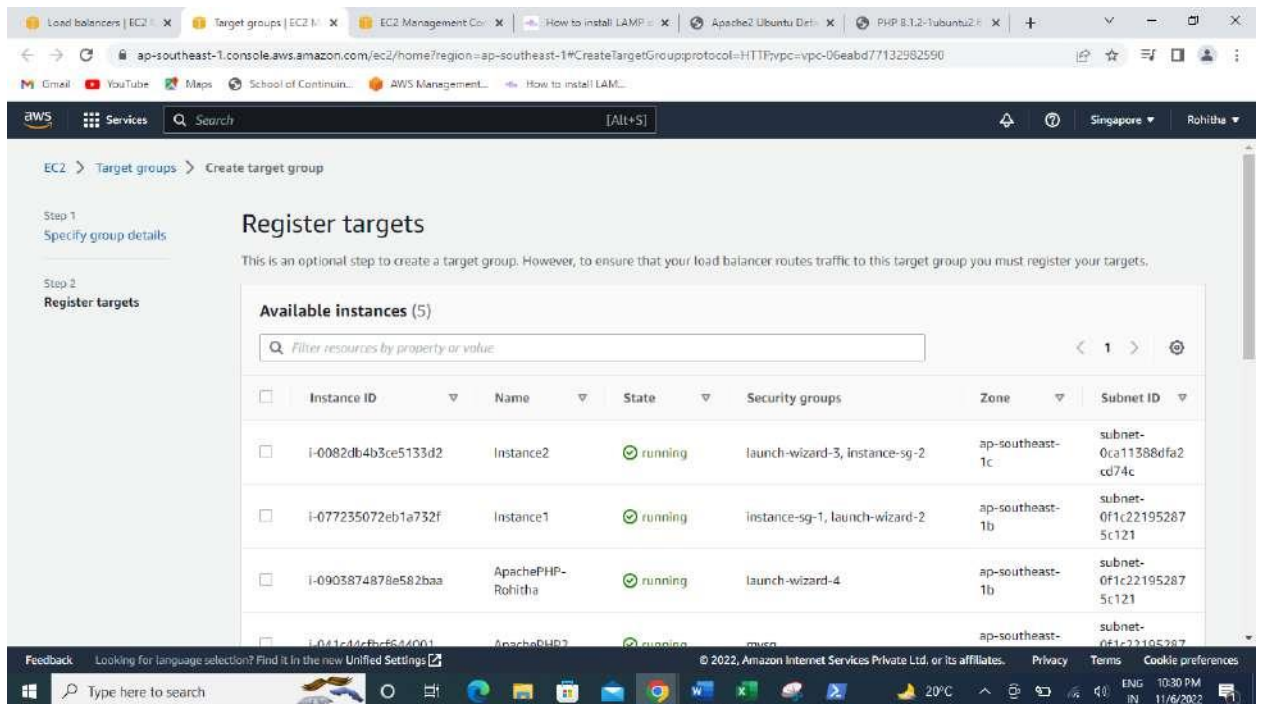


## 5. Load balancer:

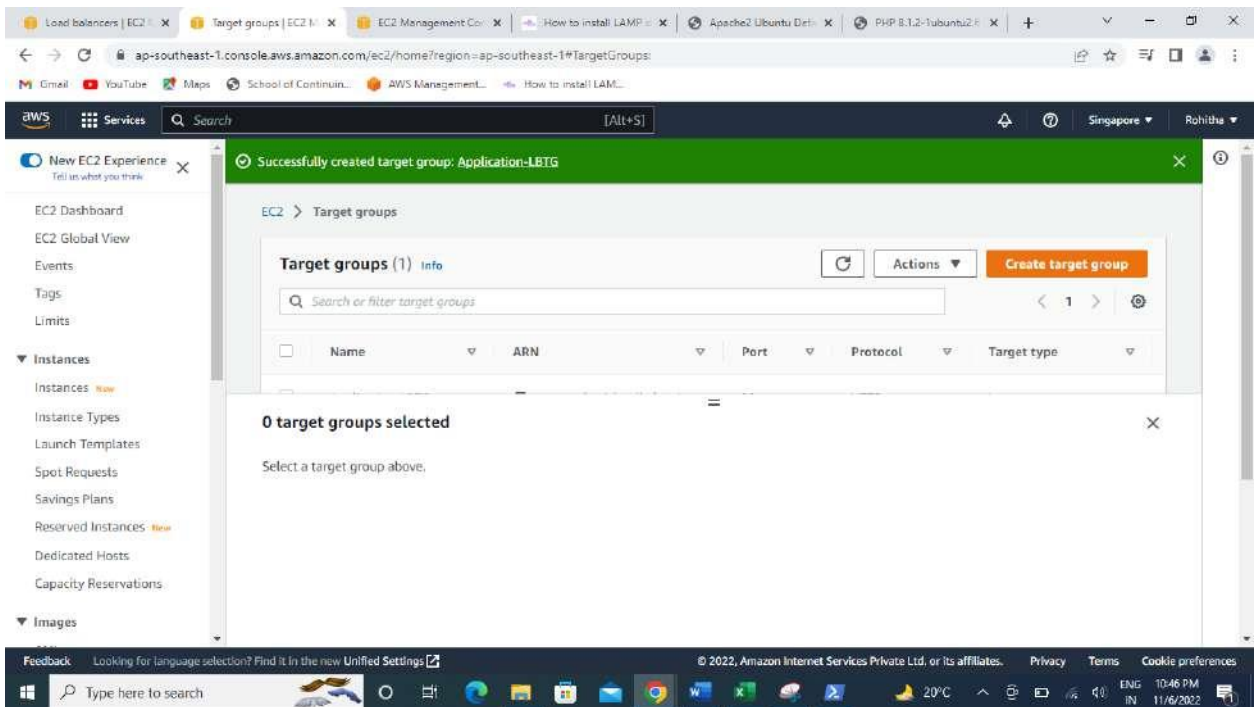
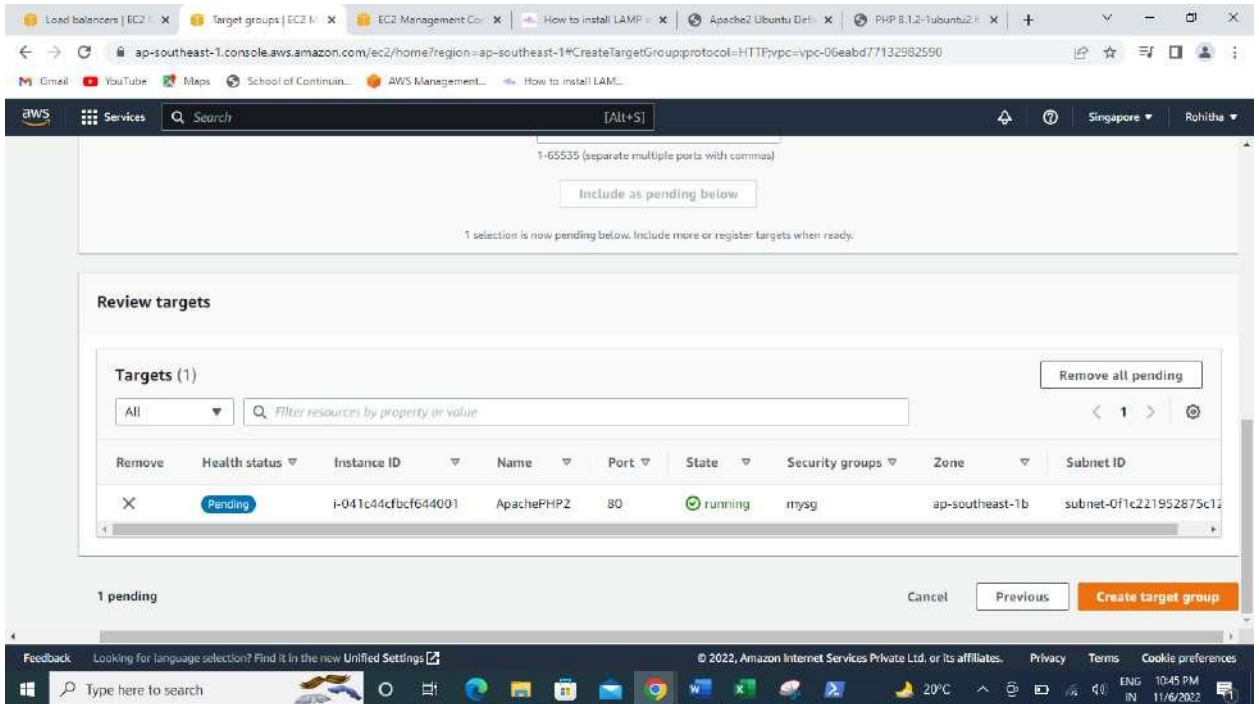
## Create Application load balancer



## Create target groups under Listeners and routing.



Select AMI instance machine and click on Include as pending below option



Once target group is created , select TG while creating Application load balancer as below:

Load balancers | EC2 | Target groups | EC2 Management Console | How to install LAMP | Apache2 Ubuntu Def... | PHP 8.1.2-1ubuntu2.8

ap-southeast-1.console.aws.amazon.com/ec2/home?region=ap-southeast-1#CreateALBWizard

Services Search [Alt+S] Singapore Rohitha

### Listener HTTP:80

Remove

Protocol: HTTP Port: 80 (1-65535)

Default action: Info

Forward to: Application-LBTG (Target type: Instance, IPv4) HTTP

Create target group

**Listener tags - optional**

Consider adding tags to your listener. Tags enable you to categorize your AWS resources so you can more easily manage them.

Add listener tag

You can add up to 50 more tags.

Add listener

**Add-on services - optional**

Additional AWS services can be integrated with this load balancer at launch. You can also add these and other services after your load balancer is created by reviewing the "Integrated Services" tab for the selected load balancer.

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Type here to search

Load balancers | EC2 | Target groups | EC2 Management Console | How to install LAMP | Apache2 Ubuntu Def... | PHP 8.1.2-1ubuntu2.8

ap-southeast-1.console.aws.amazon.com/ec2/home?region=ap-southeast-1#CreateALBWizard

Services Search [Alt+S] Singapore Rohitha

### Summary

Review and confirm your configurations. Estimate cost

<b>Basic configuration</b> Edit Rohitha-LB <ul style="list-style-type: none"> <li>Internet-facing</li> <li>IPv4</li> </ul>	<b>Security groups</b> Edit <ul style="list-style-type: none"> <li>LB SG sg-0e50ee9b3e38d8f9f</li> </ul>	<b>Network mapping</b> Edit VPC vpc-06eabd77132982590 <ul style="list-style-type: none"> <li>ap-southeast-1a subnet-0c0d5e470bc302698</li> <li>ap-southeast-1b subnet-0f1c221952875c121</li> <li>ap-southeast-1c subnet-0ca11388f1fa2cd74c</li> </ul>	<b>Listeners and routing</b> Edit <ul style="list-style-type: none"> <li>HTTP:80 (defaults to Application-LBTG)</li> </ul>
<b>Add-on services</b> Edit None		<b>Tags</b> Edit None	

**Attributes**

Certain default attributes will be applied to your load balancer. You can view and edit them after creating the load balancer.

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Type here to search

Load balancers | EC2 | Target groups | EC2 Management Console | How to install LAMP | Apache2 Ubuntu Def... | PHP 8.1.2-1ubuntu2.8

ap-southeast-1.console.aws.amazon.com/ec2/home?region=ap-southeast-1#CreateLBWizardSuccessloadBalancerAm=arn:aws:elasticloadbalancing:ap-south...

Services Search [Alt+S] Singapore Rohitha

**Successfully created load balancer: Rohitha-LB**  
 Note: It might take a few minutes for your load balancer to be fully set up and ready to route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.

EC2 > Load balancers > Create Application Load Balancer

## Create Application Load Balancer

**Suggested next steps**

- Review, customize, or enable attributes for your load balancer and listeners using the **Description** and **Listeners** tabs within **Rohitha-LB**.
- Discover other services that you can integrate with your load balancer. Visit the **Integrated services** tab within **Rohitha-LB**.

[View load balancer](#)

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Type here to search

EC2 Management Console | Target groups | EC2 Management Console | How to install LAMP | Apache2 Ubuntu Def... | PHP 8.1.2-1ubuntu2.8

ap-southeast-1.console.aws.amazon.com/ec2/home?region=ap-southeast-1#LoadBalancerssearch=Rohitha-LBsort=loadBalancerName

Services Search [Alt+S] Singapore Rohitha

**Create Load Balancer** Actions

search: Rohitha-LB Add filter | 1 to 1 of 1

Name	DNS name	State	VPC ID	Availability Zones	Type
Rohitha-LB	Rohitha-LB-1923730868.ap-...	Active	vpc-06eabd77132982590	ap-southeast-1a, ap-so...	application

**Load balancer: Rohitha-LB**

Description Listeners Monitoring Integrated services Tags

**Basic Configuration**

Name Rohitha-LB

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Type here to search

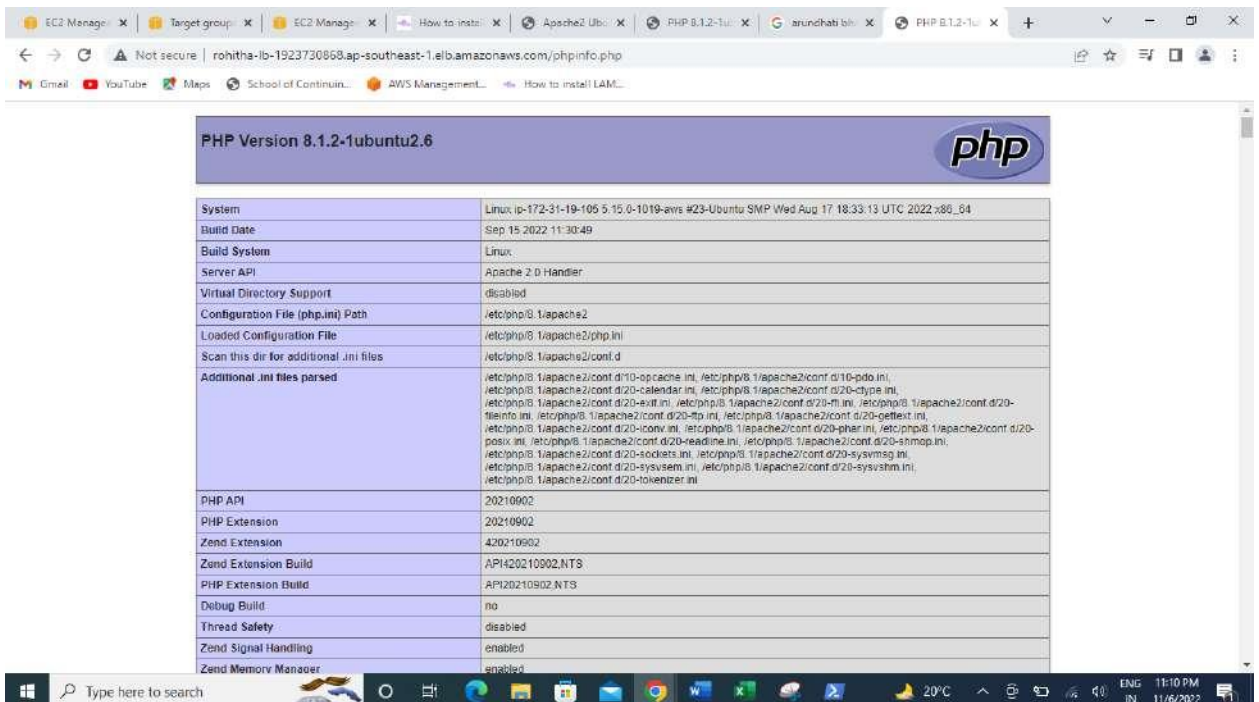
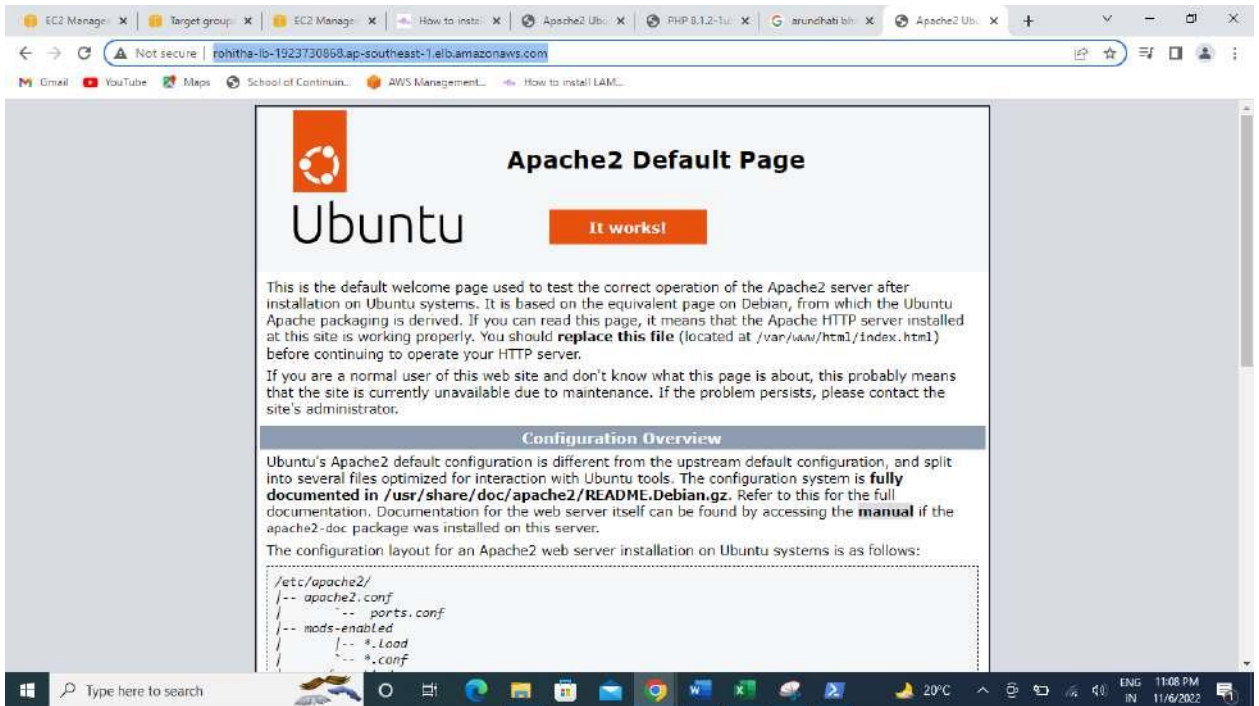
The screenshot shows the AWS Management Console interface for Target Groups. The left sidebar contains navigation options like Elastic Block Store, Network & Security, Load Balancing, and Auto Scaling. The main content area displays 'Target groups (1)' with a table listing one target group: 'Application-LBTG' with port 80 and protocol HTTP. A modal window is open, stating '0 target groups selected' and 'Select a target group above.'

The screenshot shows the AWS Management Console interface for Target Groups. The left sidebar contains navigation options like EC2 Dashboard, Instances, and Images. The main content area displays 'Target groups (1/1)' with a table listing one target group: 'Application-LBTG'. A modal window is open, showing details for 'Target group: Application-LBTG'. The modal includes a table with the following data:

Instance	HTTP: 80	HTTP1	vpc-06eabd77132982590
IP address type: IPv4	Load balancer: Rohitha-LB		
Total targets: 1	Healthy: 1	Unhealthy: 0	Unused: 0
	Initial: 0	Draining: 0	

Select DNS from load balancer.





## 6. VPC :

1. Create VPC and provide range of VPC as 192.168.0.0/16

