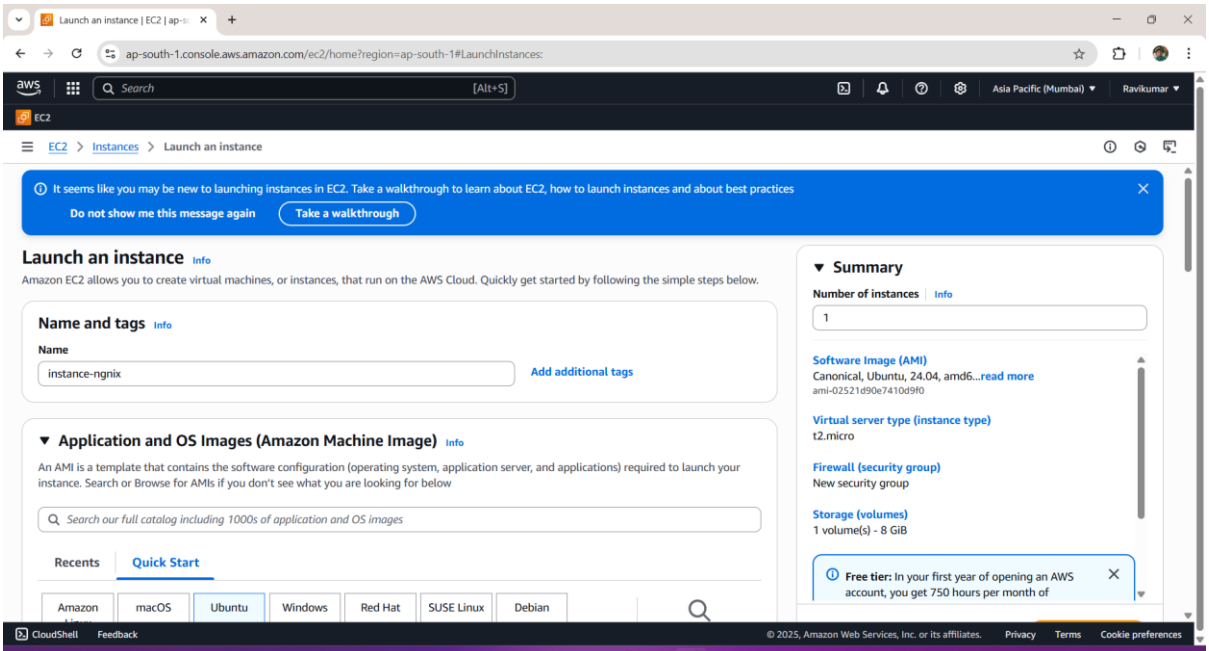
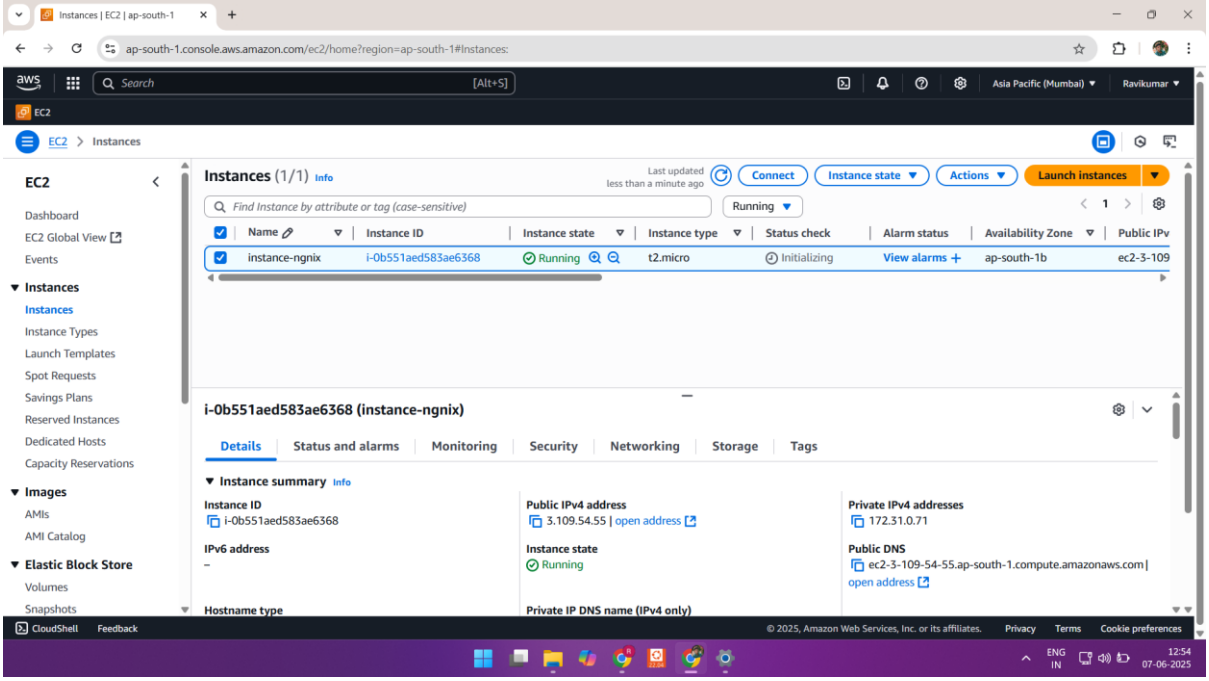
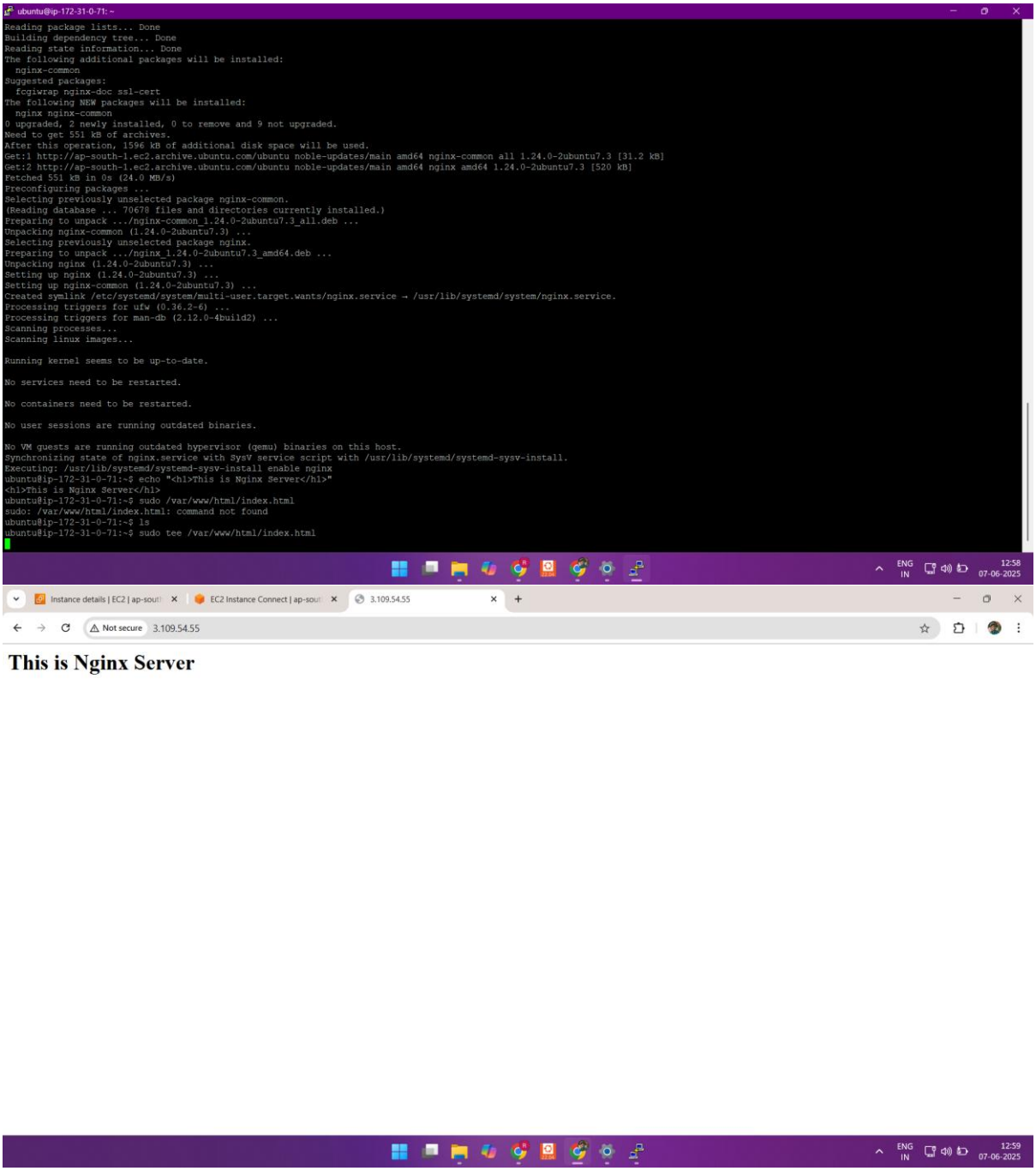
Launch two ec2-instances and connect it to a application load balancer, where the output traffic from the server must be an load balancer IP address

1. First I created two ec2 instance name is nginx and apache, after that both instance are connected through with ubuntu machine using putty.
2. Run the command install apache one instance, other one is install nginx, use some words html edit use nano or directly use echo command. Run the both public ip's .
3. Go to Ec2 dashboard below target groups there, create target groups, register the both instance here. After both targets are healthy.
4. Go to create load balancer, next click application load balancer, next create. After that in ALB instance DNS name is there copy that url, paste the browser it will running both instance.






ubuntu@ip-172-31-0-71: ~
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
nginx-common
Suggested packages:
fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
nginx nginx-common
0 upgraded, 2 newly installed, 0 to remove and 9 not upgraded.
Need to get 551 kB of archives.
After this operation, 1596 kB of additional disk space will be used.
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx-common all 1.24.0-2ubuntu7.3 [31.2 kB]
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx amd64 1.24.0-2ubuntu7.3 [520 kB]
Fetched 551 kB in 0s (24.0 MB/s)
Preconfiguring packages ...
Selecting previously unselected package nginx-common.
(Reading database ... 70670 files and directories currently installed.)
Preparing to unpack .../nginx-common_1.24.0-2ubuntu7.3_all.deb ...
Unpacking nginx-common (1.24.0-2ubuntu7.3) ...
Selecting previously unselected package nginx.
Preparing to unpack .../nginx_1.24.0-2ubuntu7.3_amd64.deb ...
Unpacking nginx (1.24.0-2ubuntu7.3) ...
Setting up nginx (1.24.0-2ubuntu7.3) ...
Setting up nginx-common (1.24.0-2ubuntu7.3) ...
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /usr/lib/systemd/system/nginx.service.
Processing triggers for ufw (0.36.2-6) ...
Processing triggers for man-db (2.12.0-4build2) ...
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.
Synchronizing state of nginx.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable nginx
ubuntu@ip-172-31-0-71:~$ echo "<h1>This is Nginx Server</h1>"
<h1>This is Nginx Server</h1>
ubuntu@ip-172-31-0-71:~$ sudo /var/www/html/index.html
sudo: /var/www/html/index.html: command not found
ubuntu@ip-172-31-0-71:~$ ls
ubuntu@ip-172-31-0-71:~$ sudo tee /var/www/html/index.html
ENG
IN
12:58
07-06-2025
Instance details | EC2 | ap-sout
EC2 Instance Connect | ap-sout
3.109.54.55
Not secure
3.109.54.55
This is Nginx Server
ENG
IN
12:59
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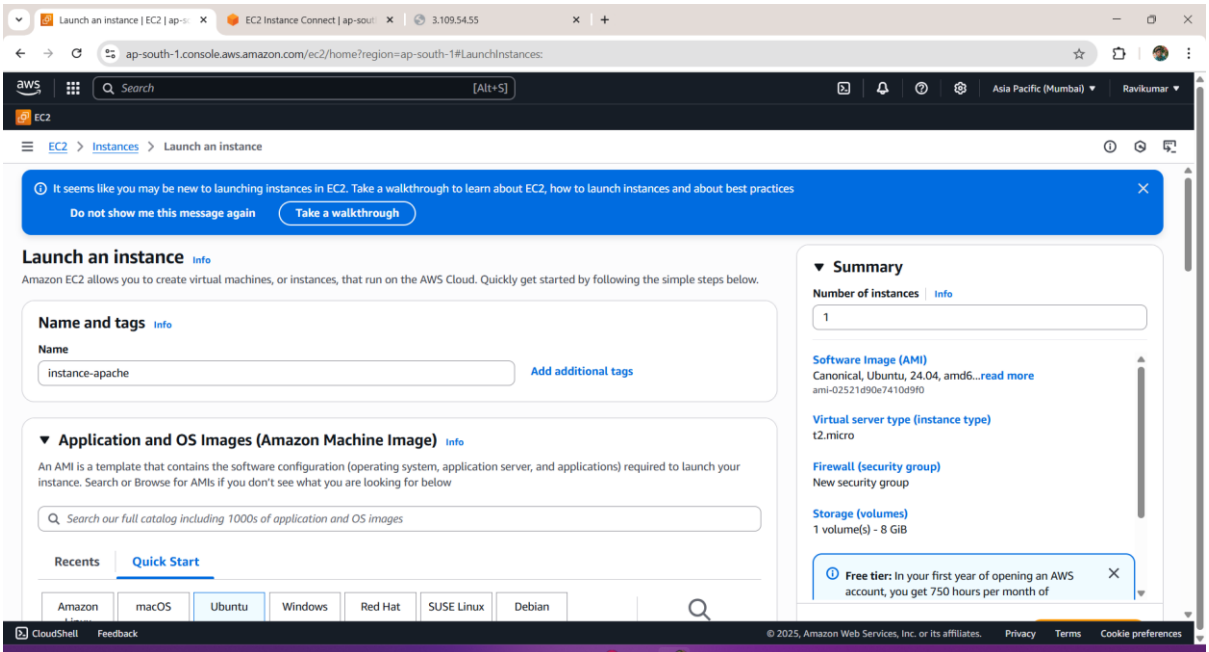
Launch an instance | EC2 | ap-s
EC2 Instance Connect | ap-sout
3.109.54.55
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LaunchInstances:
Search
[Alt+S]
Asia Pacific (Mumbai)
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EC2
EC2 > Instances > Launch an instance
It seems like you may be new to launching instances in EC2. Take a walkthrough to learn about EC2, how to launch instances and about best practices
Do not show me this message again
Take a walkthrough
Launch an instance Info
Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.
Name and tags Info
Name
instance-apache
Add additional tags
Application and OS Images (Amazon Machine Image) Info
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below
Search our full catalog including 1000s of application and OS images
Recents
Quick Start
Amazon
macOS
Ubuntu
Windows
Red Hat
SUSE Linux
Debian
Summary
Number of instances Info
1
Software Image (AMI)
Canonical, Ubuntu, 24.04, amd6...read more
ami-02521d90e7410d9f0
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year of opening an AWS account, you get 750 hours per month of
CloudShell
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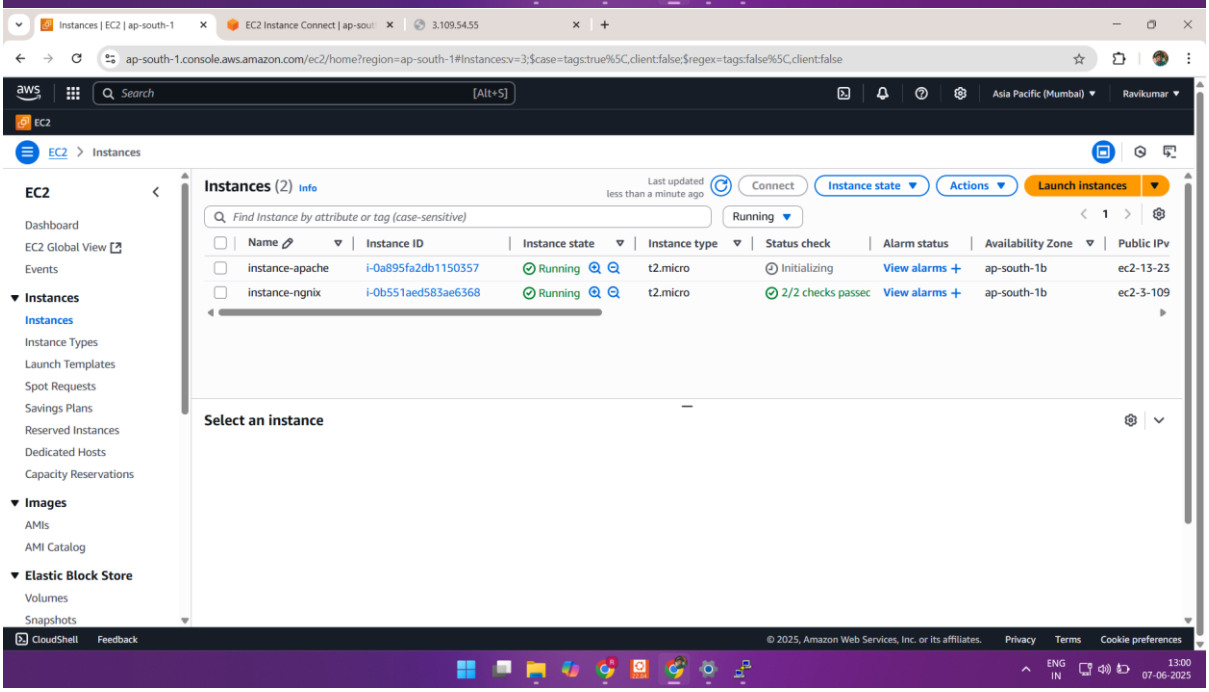
Instances | EC2 | ap-south-1
EC2 Instance Connect | ap-sout
3.109.54.55
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#Instances:v=3;$case=tags:true%5C,client:false;$regex=tags:false%5C,client:false
Search
[Alt+S]
Asia Pacific (Mumbai)
Ravikumar
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EC2 > Instances
EC2
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EC2 Global View
Events
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Instances (2) Info
Last updated
less than a minute ago
Connect
Instance state
Actions
Launch instances
Find Instance by attribute or tag (case-sensitive)
Running
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
Public IPv
instance-apache
i-0a895fa2db1150357
Running
t2.micro
Initializing
View alarms
ap-south-1b
ec2-13-23
instance-ngnix
i-0b551aed583ae6368
Running
t2.micro
2/2 checks passec
View alarms
ap-south-1b
ec2-3-109
Select an instance
CloudShell
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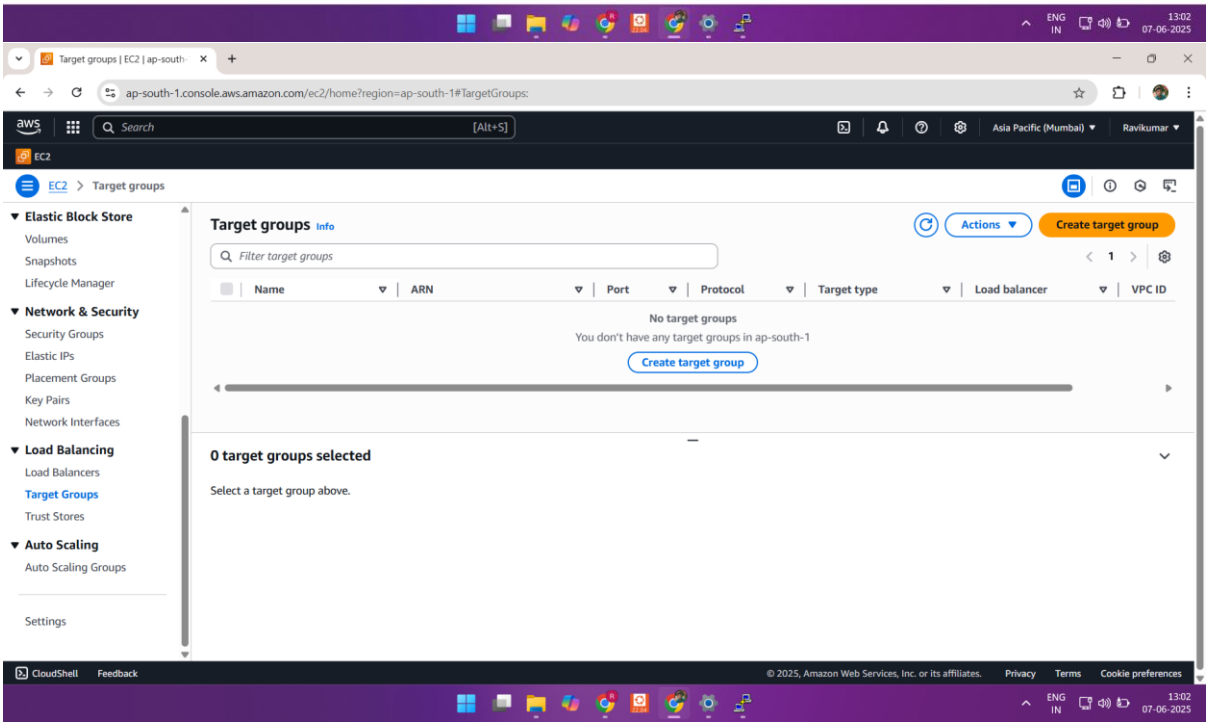
Not secure
13.232.127.207
This is Apache Server


ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#TargetGroups:
Search
[Alt+S]
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EC2
EC2 > Target groups
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Trust Stores
Auto Scaling
Auto Scaling Groups
Settings
Target groups Info
Actions
Create target group
Filter target groups
Name
ARN
Port
Protocol
Target type
Load balancer
VPC ID
No target groups
You don't have any target groups in ap-south-1
Create target group
0 target groups selected
Select a target group above.
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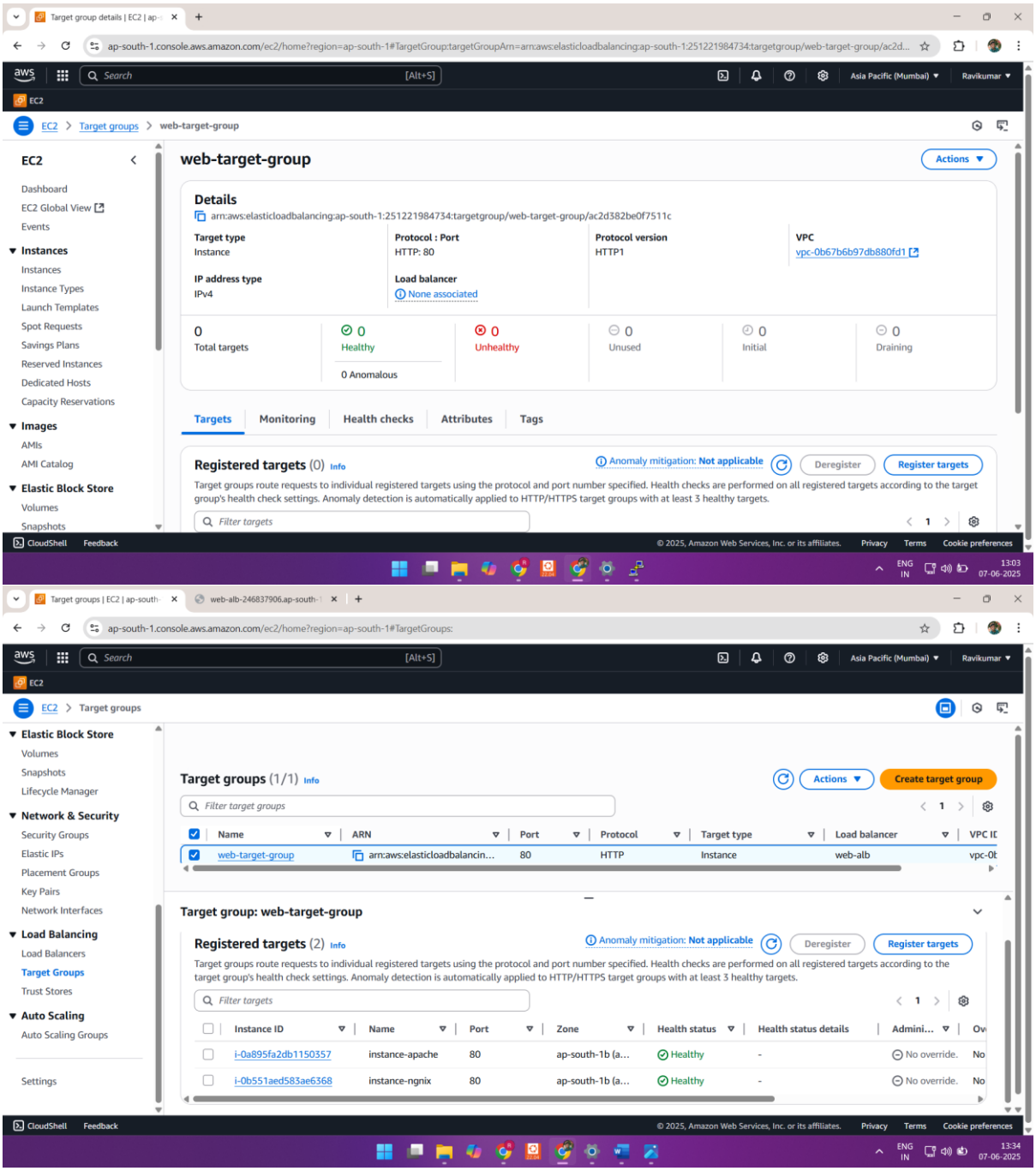
Target group details | EC2 | ap-
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#TargetGroup:targetGroupArn=arn:aws:elasticloadbalancing:ap-south-1:251221984734:targetgroup/web-target-group/ac2d...
Search [Alt+S]
Asia Pacific (Mumbai)
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EC2
EC2 > Target groups > web-target-group
EC2
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Instances
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Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
web-target-group
Actions
Details
arn:aws:elasticloadbalancing:ap-south-1:251221984734:targetgroup/web-target-group/ac2d382be0f7511c
Target type
Instance
Protocol : Port
HTTP: 80
Protocol version
HTTP1
VPC
vpc-0b67b6b97db880fd1
IP address type
IPv4
Load balancer
None associated
0
Total targets
0
Healthy
0 Anomalous
0
Unhealthy
0
Unused
0
Initial
0
Draining
Targets
Monitoring
Health checks
Attributes
Tags
Registered targets (0) Info
Anomaly mitigation: Not applicable
Deregister
Register targets
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.
Filter targets
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ENG IN
13:03
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Target groups | EC2 | ap-south-
web-alb-246837906.ap-south-1
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#TargetGroups:
EC2 > Target groups
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
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Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Trust Stores
Auto Scaling
Auto Scaling Groups
Settings
Target groups (1/1) Info
Actions
Create target group
Filter target groups
Name
ARN
Port
Protocol
Target type
Load balancer
VPC ID
web-target-group
arn:aws:elasticloadbalancin...
80
HTTP
Instance
web-alb
vpc-0b
Target group: web-target-group
Registered targets (2) Info
Anomaly mitigation: Not applicable
Deregister
Register targets
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.
Filter targets
Instance ID
Name
Port
Zone
Health status
Health status details
Admini...
i-0a895fa2db1150357
instance-apache
80
ap-south-1b (a...
Healthy
-
No override.
i-0b551aed583ae6368
instance-ngnix
80
ap-south-1b (a...
Healthy
-
No override.
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13:34
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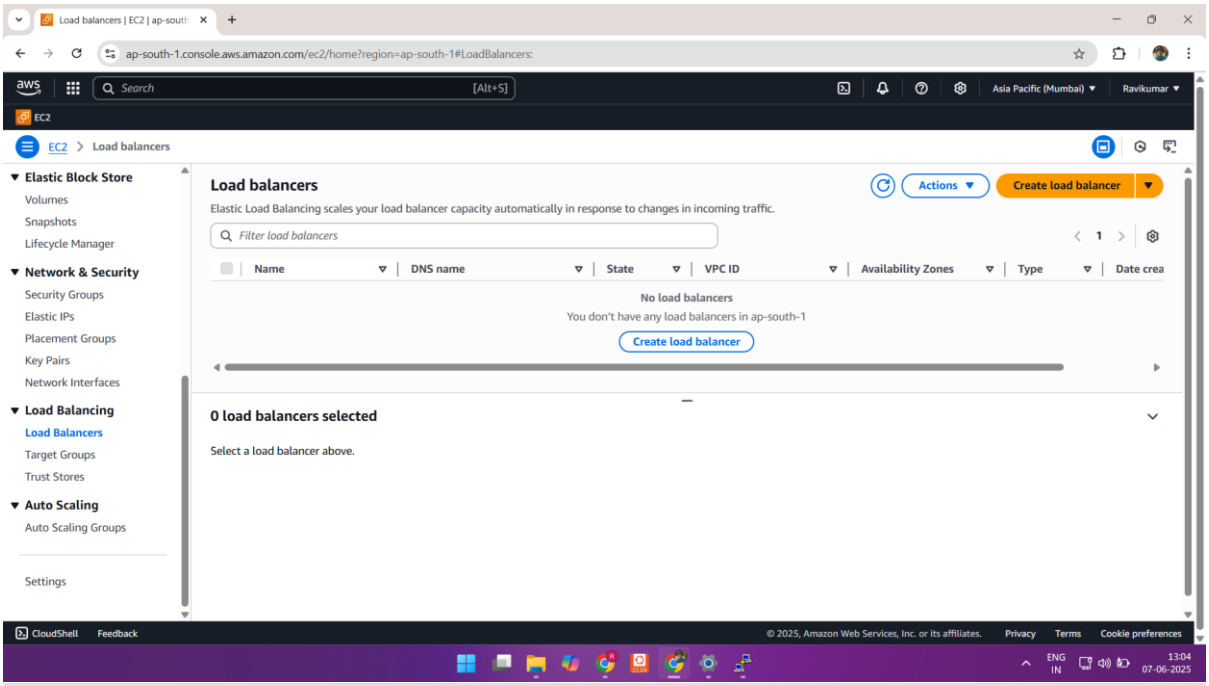
Load balancers | EC2 | ap-south
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LoadBalancers:
Search
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EC2 > Load balancers
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Network & Security
Security Groups
Elastic IPs
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Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Trust Stores
Auto Scaling
Auto Scaling Groups
Settings
Load balancers
Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.
Actions
Create load balancer
Filter load balancers
Name
DNS name
State
VPC ID
Availability Zones
Type
Date crea
No load balancers
You don't have any load balancers in ap-south-1
Create load balancer
0 load balancers selected
Select a load balancer above.
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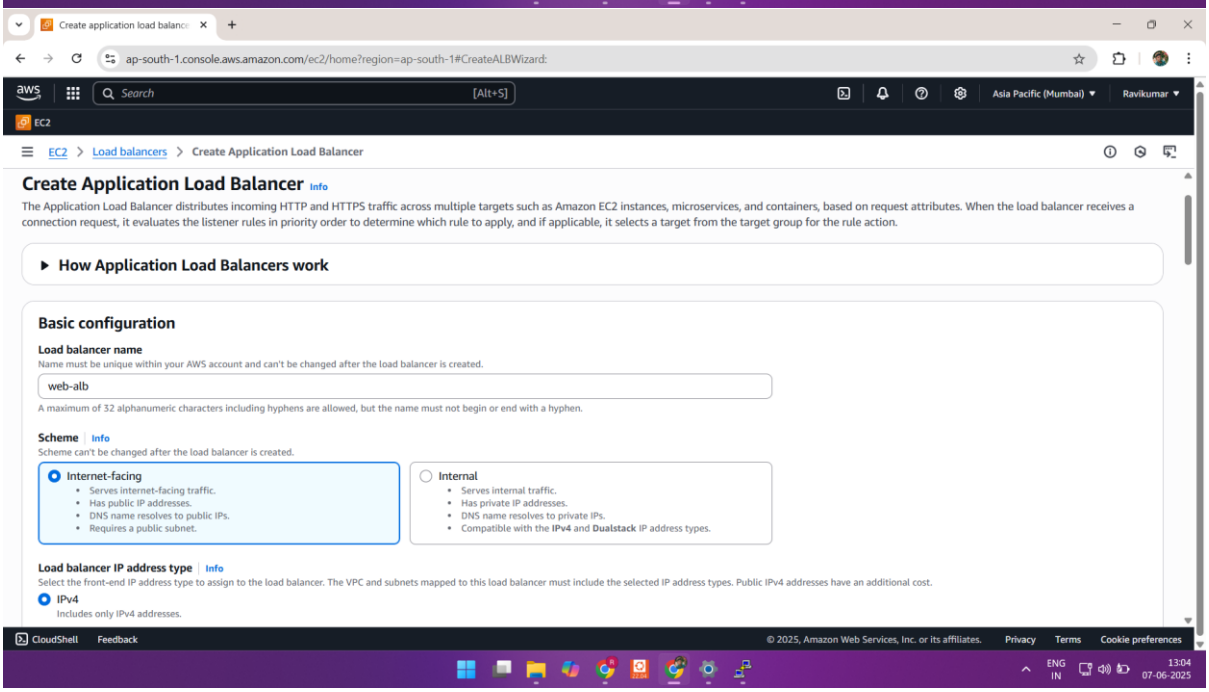
Create application load balanc
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#CreateALBWizard:
Search
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EC2
EC2 > Load balancers > Create Application Load Balancer
Create Application Load Balancer Info
The Application Load Balancer distributes incoming HTTP and HTTPS traffic across multiple targets such as Amazon EC2 instances, microservices, and containers, based on request attributes. When the load balancer receives a connection request, it evaluates the listener rules in priority order to determine which rule to apply, and if applicable, it selects a target from the target group for the rule action.
How Application Load Balancers work
Basic configuration
Load balancer name
Name must be unique within your AWS account and can't be changed after the load balancer is created.
web-alb
A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.
Scheme Info
Scheme can't be changed after the load balancer is created.
Internet-facing
Serves internet-facing traffic.
Has public IP addresses.
DNS name resolves to public IPs.
Requires a public subnet.
Internal
Serves internal traffic.
Has private IP addresses.
DNS name resolves to private IPs.
Compatible with the IPv4 and Dualstack IP address types.
Load balancer IP address type Info
Select the front-end IP address type to assign to the load balancer. The VPC and subnets mapped to this load balancer must include the selected IP address types. Public IPv4 addresses have an additional cost.
IPv4
Includes only IPv4 addresses.
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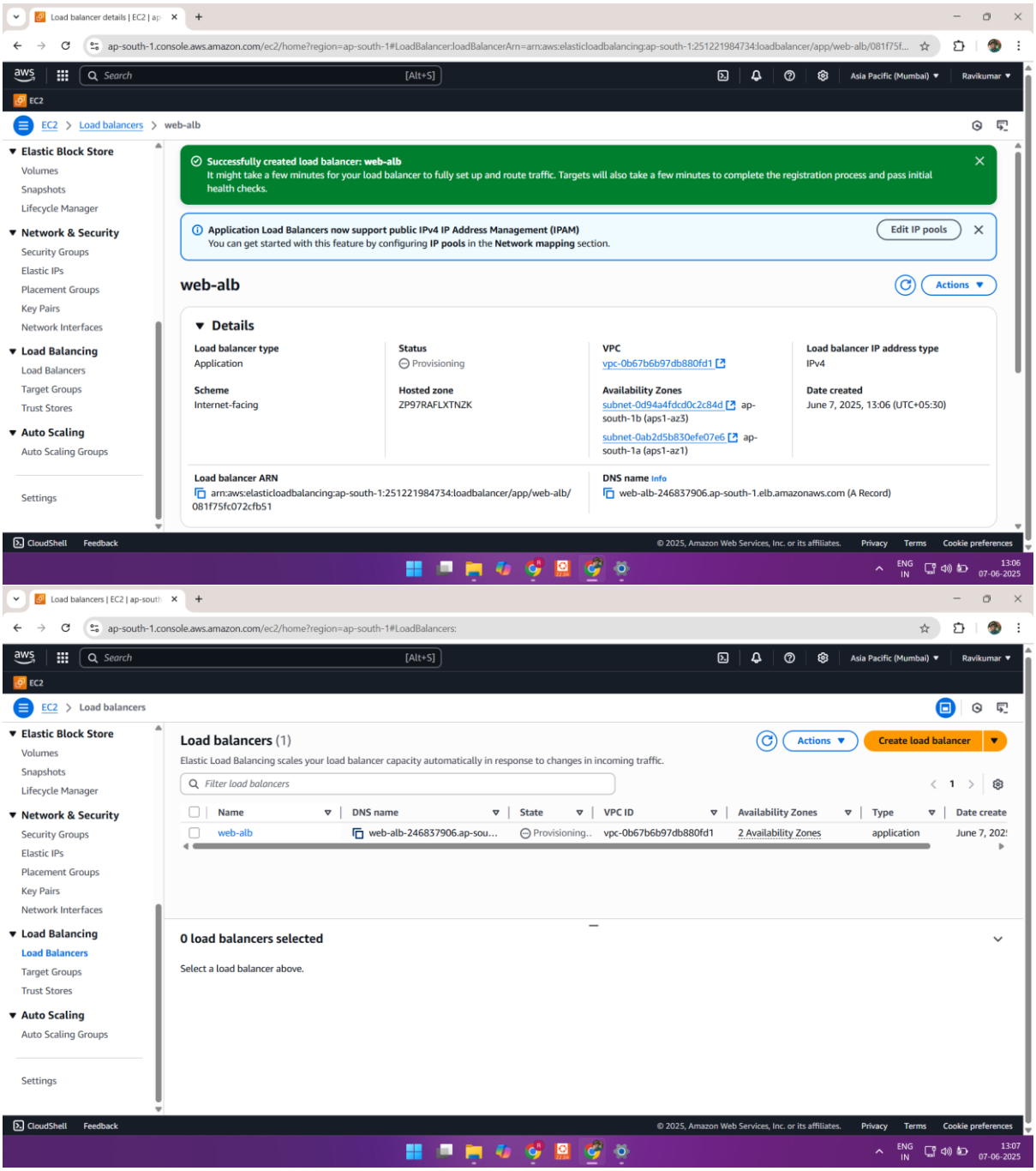
Load balancer details | EC2 | ap
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LoadBalancer:loadBalancerArn=arn:aws:elasticloadbalancing:ap-south-1:251221984734:loadbalancer/app/web-alb/081f75f...
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EC2
EC2 > Load balancers > web-alb
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Trust Stores
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Auto Scaling Groups
Settings
Successfully created load balancer: web-alb
It might take a few minutes for your load balancer to fully set up and route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.
Application Load Balancers now support public IPv4 IP Address Management (IPAM)
You can get started with this feature by configuring IP pools in the Network mapping section.
Edit IP pools
web-alb
Actions
Details
Load balancer type
Application
Status
Provisioning
VPC
vpc-0b67b6b97db880fd1
Load balancer IP address type
IPv4
Scheme
Internet-facing
Hosted zone
ZP97RAFLXTNZK
Availability Zones
subnet-0d94a4fdcd0c2c84d ap-south-1b (aps1-az3)
subnet-0ab2d5b830efe07e6 ap-south-1a (aps1-az1)
Date created
June 7, 2025, 13:06 (UTC+05:30)
Load balancer ARN
arn:aws:elasticloadbalancing:ap-south-1:251221984734:loadbalancer/app/web-alb/081f75fc072cfb51
DNS name Info
web-alb-246837906.ap-south-1.elb.amazonaws.com (A Record)
CloudShell
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Load balancers | EC2 | ap-south
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#LoadBalancers:
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Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Trust Stores
Auto Scaling
Auto Scaling Groups
Settings
Load balancers (1)
Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.
Actions
Create load balancer
Filter load balancers
Name
DNS name
State
VPC ID
Availability Zones
Type
Date create
web-alb
web-alb-246837906.ap-sou...
Provisioning...
vpc-0b67b6b97db880fd1
2 Availability Zones
application
June 7, 202
0 load balancers selected
Select a load balancer above.
CloudShell
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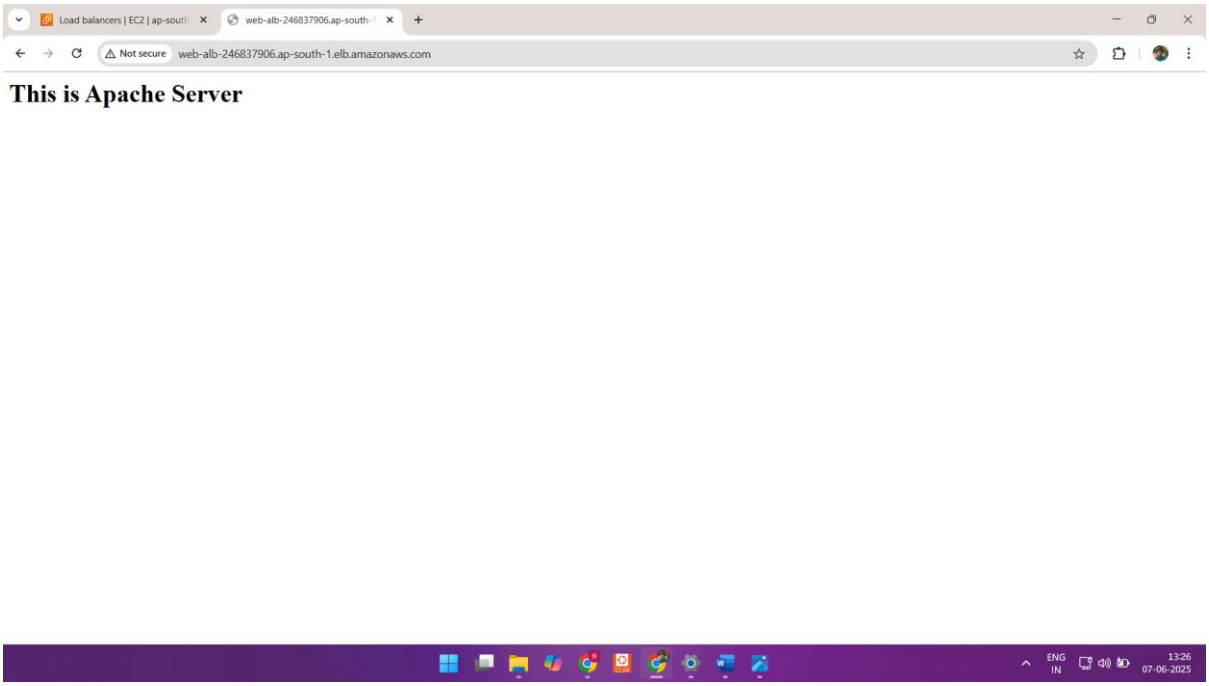
Load balancers | EC2 | ap-south
web-alb-246837906.ap-south-1
Not secure
web-alb-246837906.ap-south-1.elb.amazonaws.com
This is Apache Server
ENG
IN
13:26
07-06-2025