Module - 3 Case-Study

1. Manage the scaling requirements of the company by:

Deploying multiple compute resources on the cloud as soon as the load increases

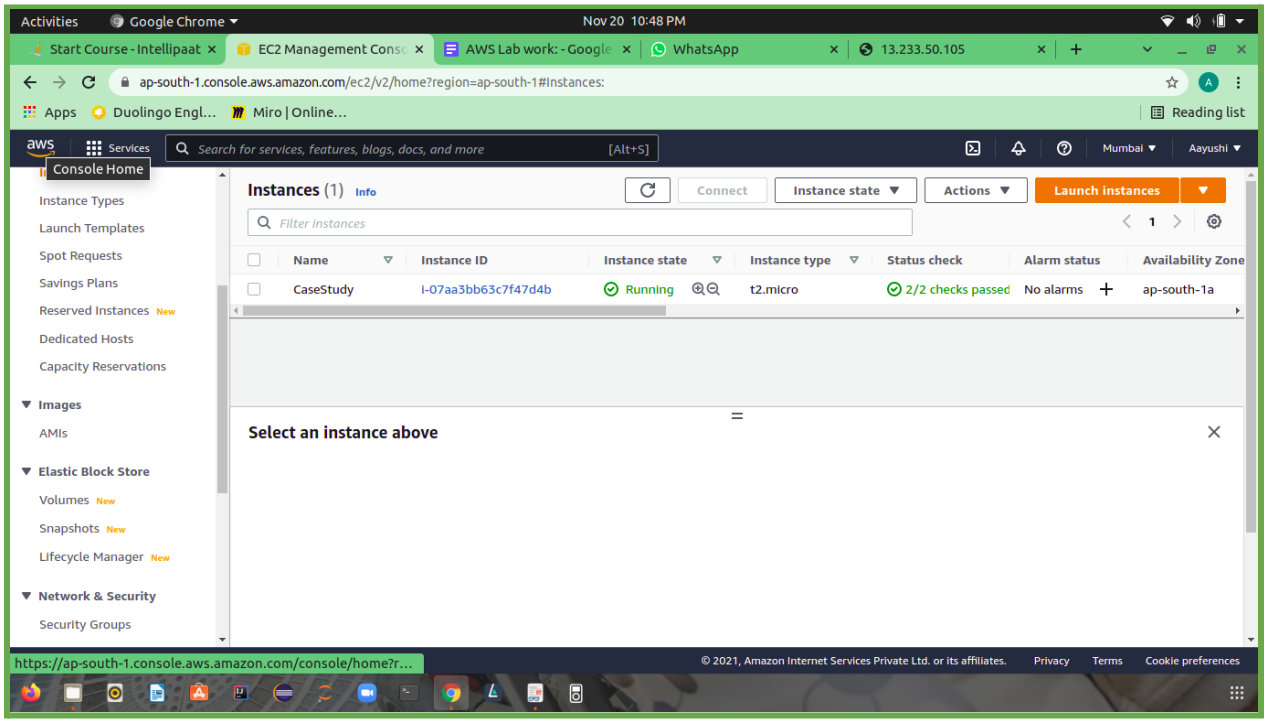
and the CPU utilization exceeds 80%

Removing the resources when the CPU utilization goes under 60%

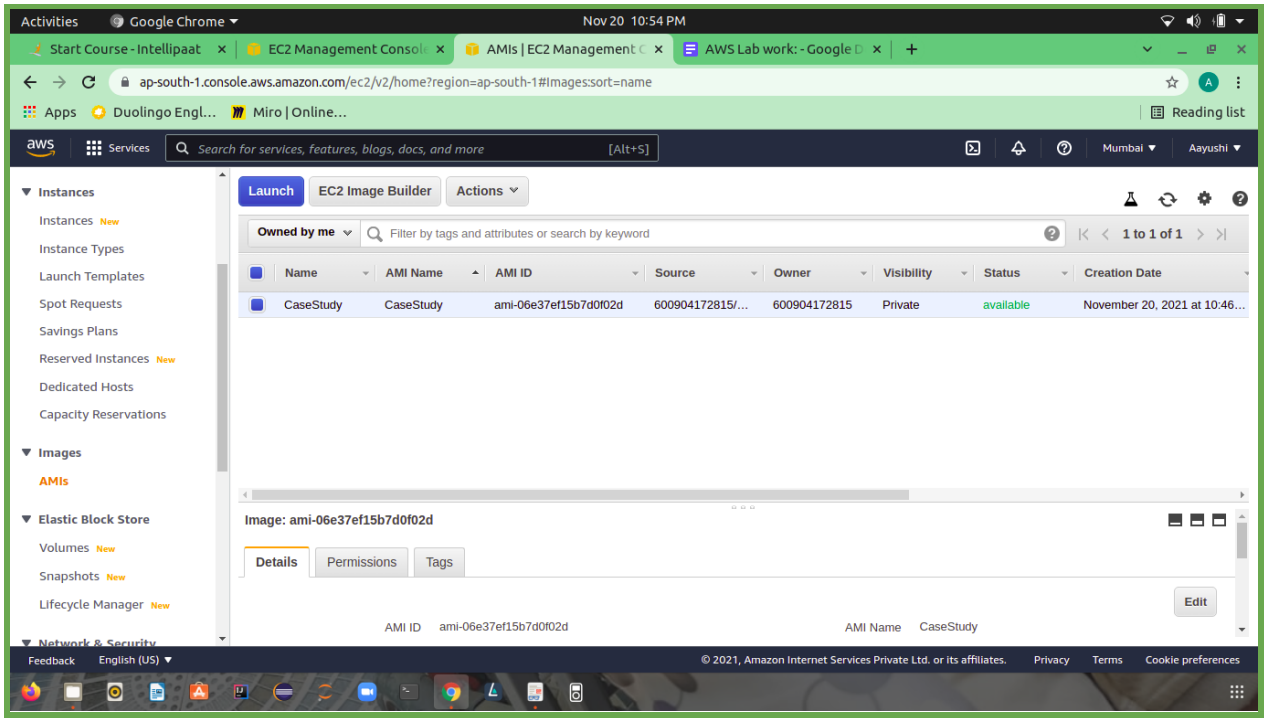
2. Create a Load balancer to distribute the load between compute resources

3. Route the traffic to the company's domain

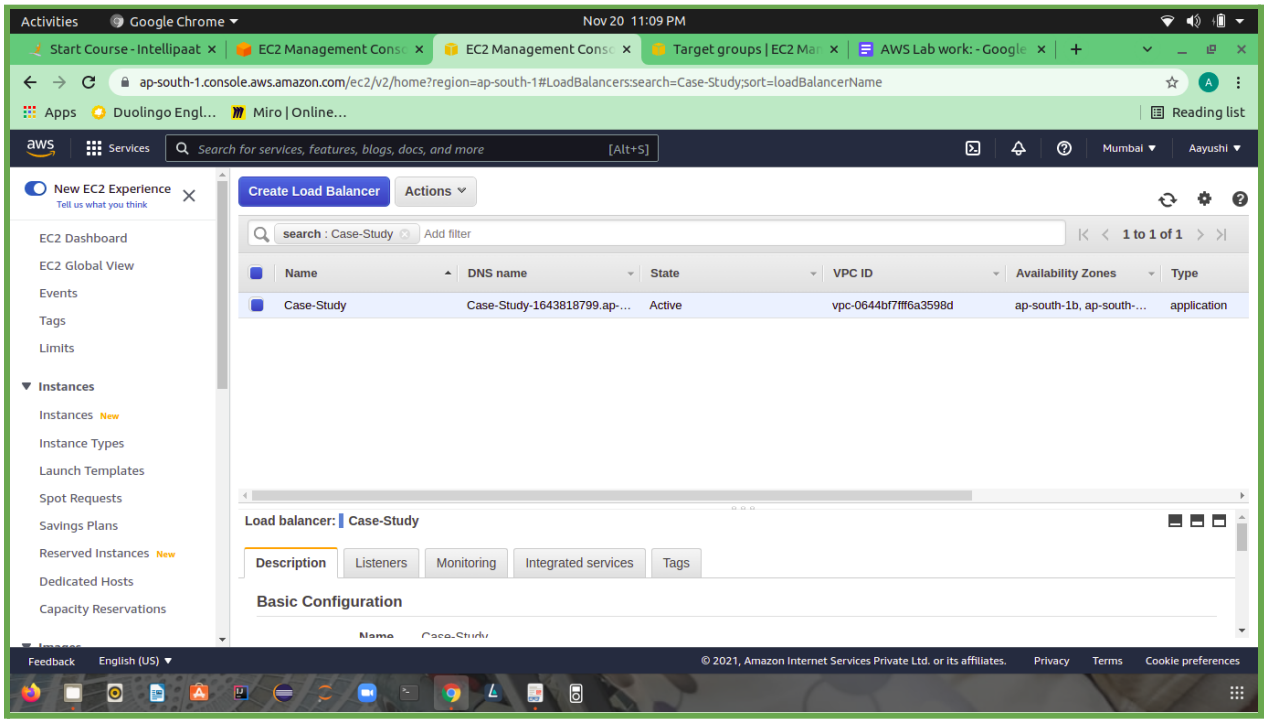
Create a instance by using bootstrapping code

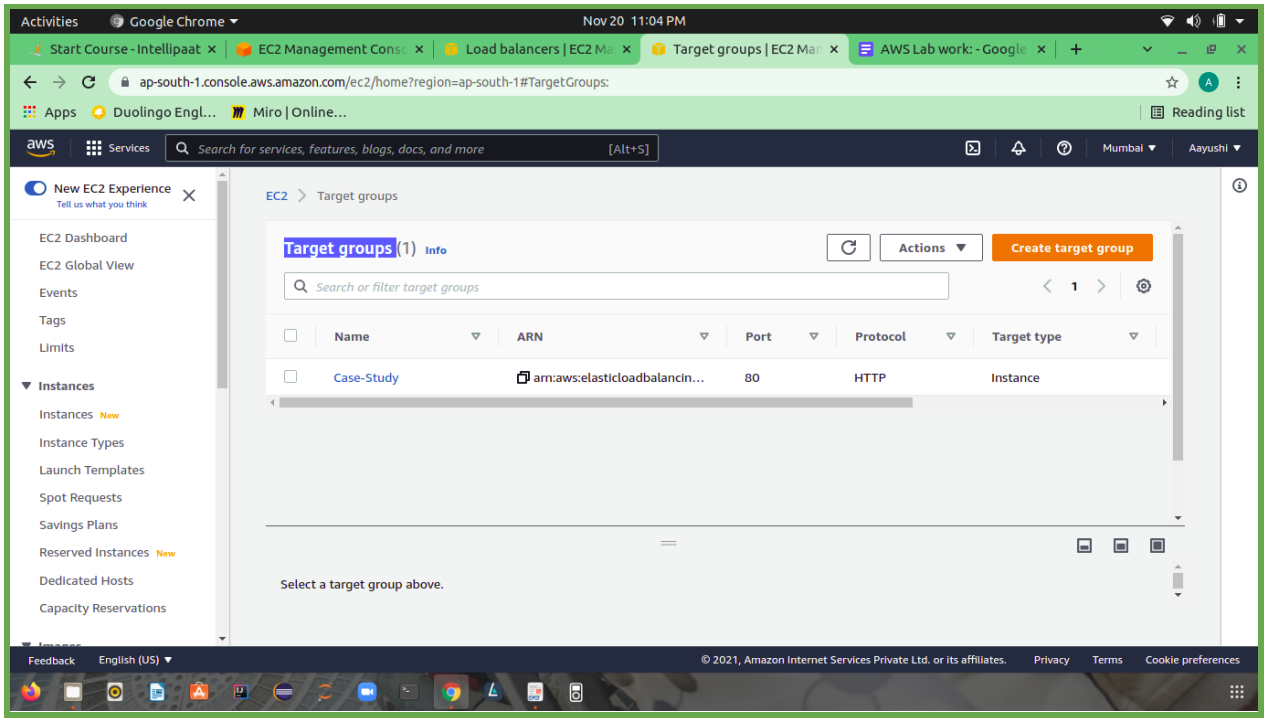


Create a AMI

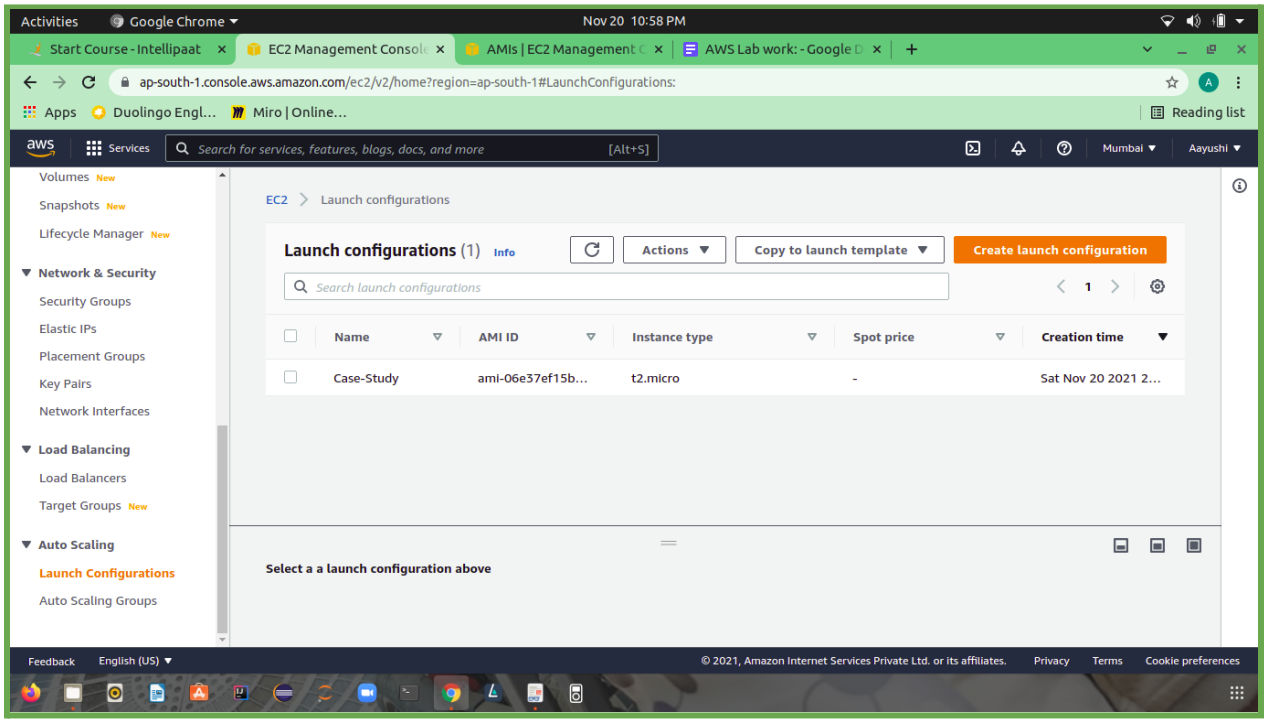


Create application load balancer and target group

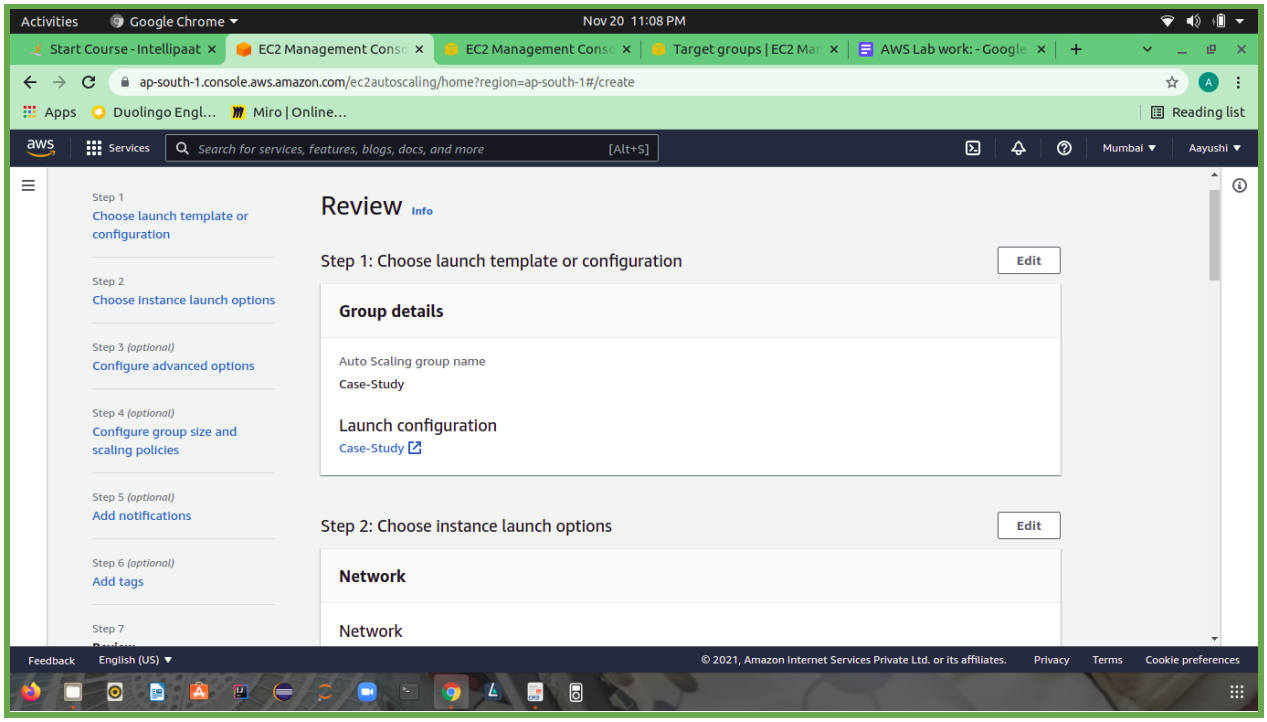




Now launch configuration to create an auto scaling group



Now create auto scaling group


Activities
Google Chrome
Nov 20 11:08 PM
Start Course - Intellipaat
EC2 Management Cons
EC2 Management Cons
Target groups | EC2 Mar
AWS Lab work: - Google
ap-south-1.console.aws.amazon.com/ec2autoscaling/home?region=ap-south-1#/create
Apps
Duolingo Engl...
Miro | Online...
Reading list
aws
Services
Search for services, features, blogs, docs, and more
[Alt+S]
Mumbai
Aayushi
Step 1
Choose launch template or configuration
Step 2
Choose instance launch options
Step 3 (optional)
Configure advanced options
Step 4 (optional)
Configure group size and scaling policies
Step 5 (optional)
Add notifications
Step 6 (optional)
Add tags
Step 7
Review
Review Info
Step 1: Choose launch template or configuration
Edit
Group details
Auto Scaling group name
Case-Study
Launch configuration
Case-Study
Step 2: Choose instance launch options
Edit
Network
Network
Feedback
English (US)
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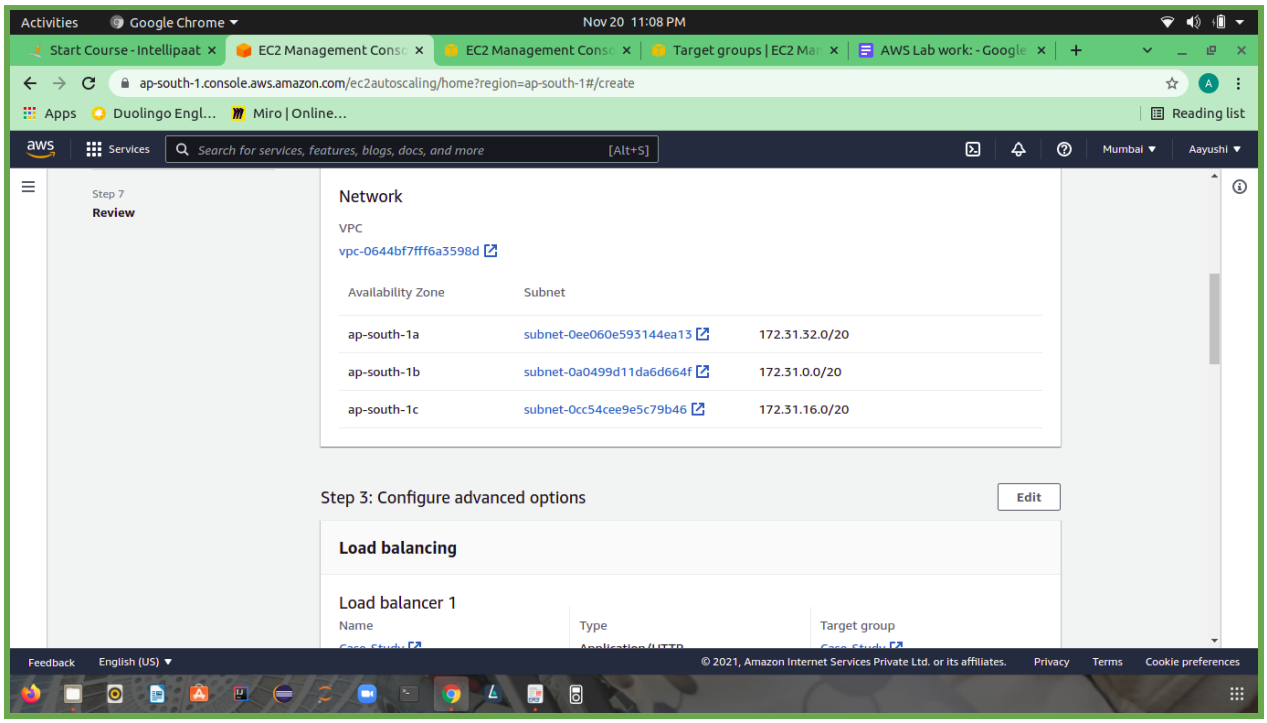
Activities
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EC2 Management Cons
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Target groups | EC2 Mar
AWS Lab work: - Google
ap-south-1.console.aws.amazon.com/ec2autoscaling/home?region=ap-south-1#/create
Apps
Duolingo Engl...
Miro | Online...
Reading list
aws
Services
Search for services, features, blogs, docs, and more
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Step 7
Review
Network
VPC
vpc-0644bf7fff6a3598d
Availability Zone
Subnet
ap-south-1a
subnet-0ee060e593144ea13
172.31.32.0/20
ap-south-1b
subnet-0a0499d11da6d664f
172.31.0.0/20
ap-south-1c
subnet-0cc54cee9e5c79b46
172.31.16.0/20
Step 3: Configure advanced options
Edit
Load balancing
Load balancer 1
Name
Type
Target group
Feedback
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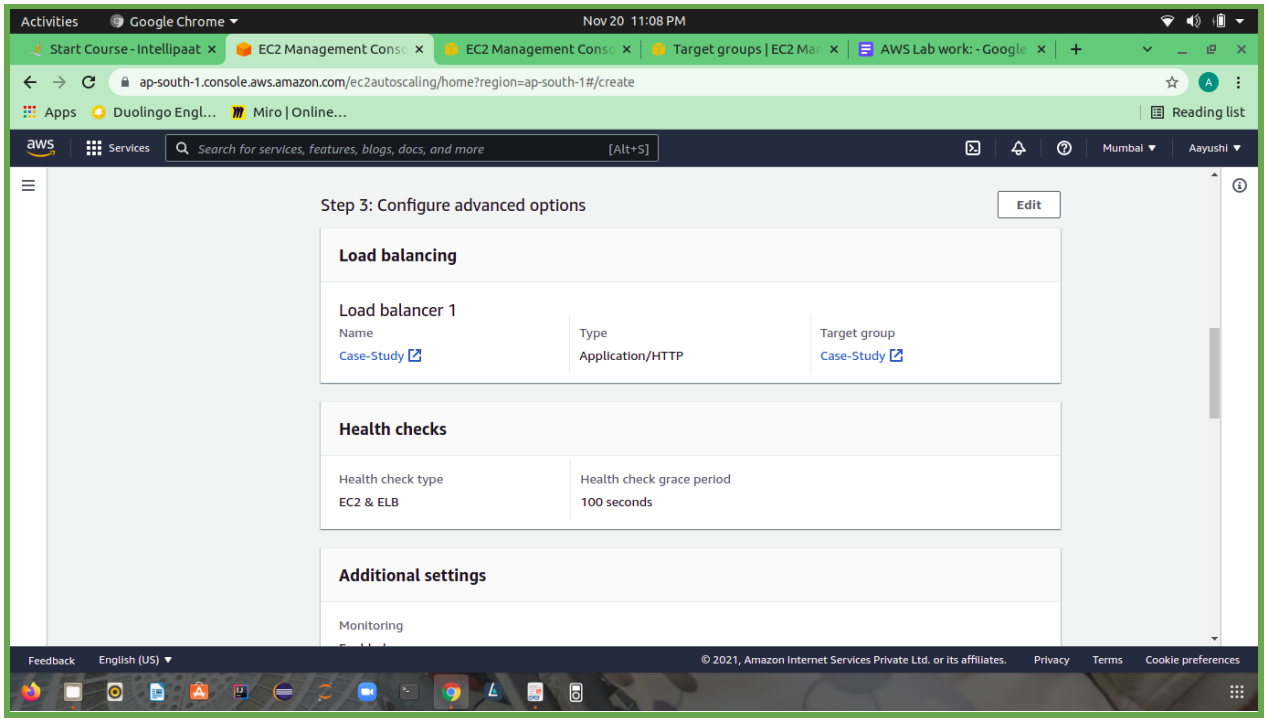
Activities
Google Chrome
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EC2 Management Cons
Target groups | EC2 Mar
AWS Lab work: - Google
ap-south-1.console.aws.amazon.com/ec2autoscaling/home?region=ap-south-1#/create
Apps
Duolingo Engl...
Miro | Online...
Reading list
aws
Services
Search for services, features, blogs, docs, and more
[Alt+S]
Mumbai
Aayushi
Step 3: Configure advanced options
Edit
Load balancing
Load balancer 1
Name
Case-Study
Type
Application/HTTP
Target group
Case-Study
Health checks
Health check type
EC2 & ELB
Health check grace period
100 seconds
Additional settings
Monitoring
Feedback
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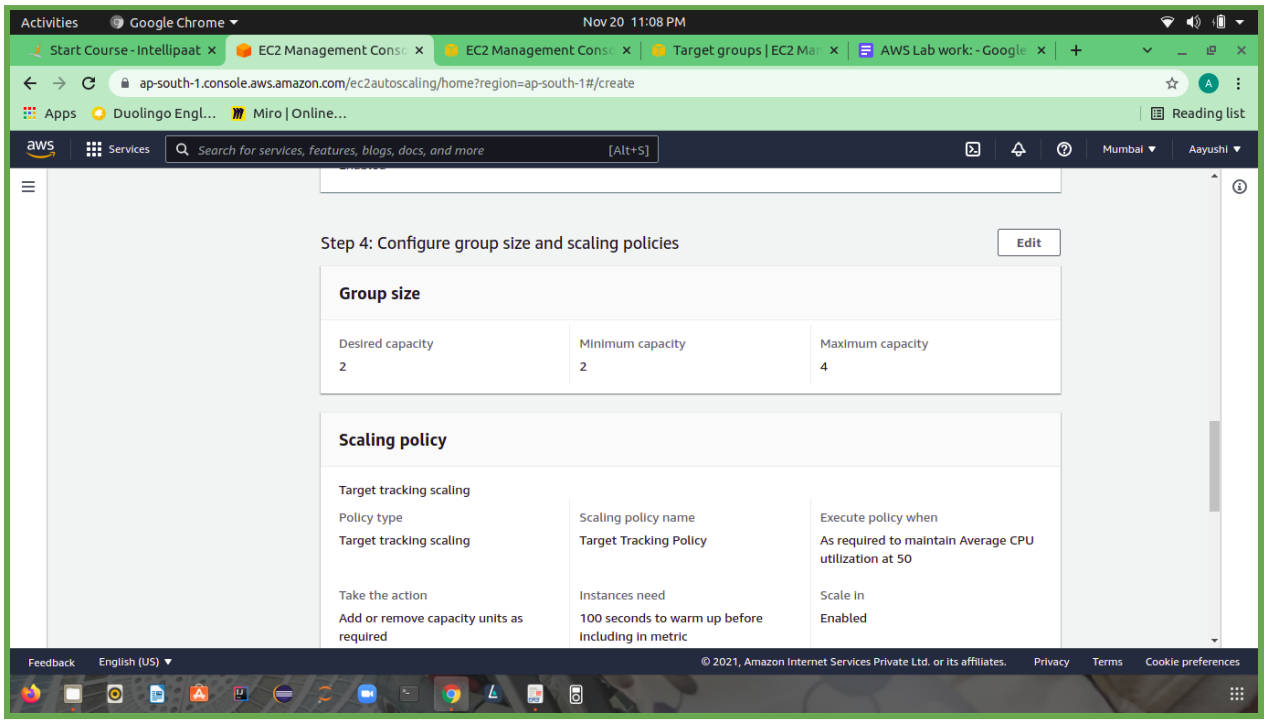
Activities
Google Chrome
Nov 20 11:08 PM
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EC2 Management Cons
EC2 Management Cons
Target groups | EC2 Mar
AWS Lab work: - Google
ap-south-1.console.aws.amazon.com/ec2autoscaling/home?region=ap-south-1#/create
Apps
Duolingo Engl...
Miro | Online...
Reading list
aws
Services
Search for services, features, blogs, docs, and more
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Mumbai
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Step 4: Configure group size and scaling policies
Edit
Group size
Desired capacity
2
Minimum capacity
2
Maximum capacity
4
Scaling policy
Target tracking scaling
Policy type
Target tracking scaling
Scaling policy name
Target Tracking Policy
Execute policy when
As required to maintain Average CPU utilization at 50
Take the action
Add or remove capacity units as required
Instances need
100 seconds to warm up before including in metric
Scale in
Enabled
Feedback
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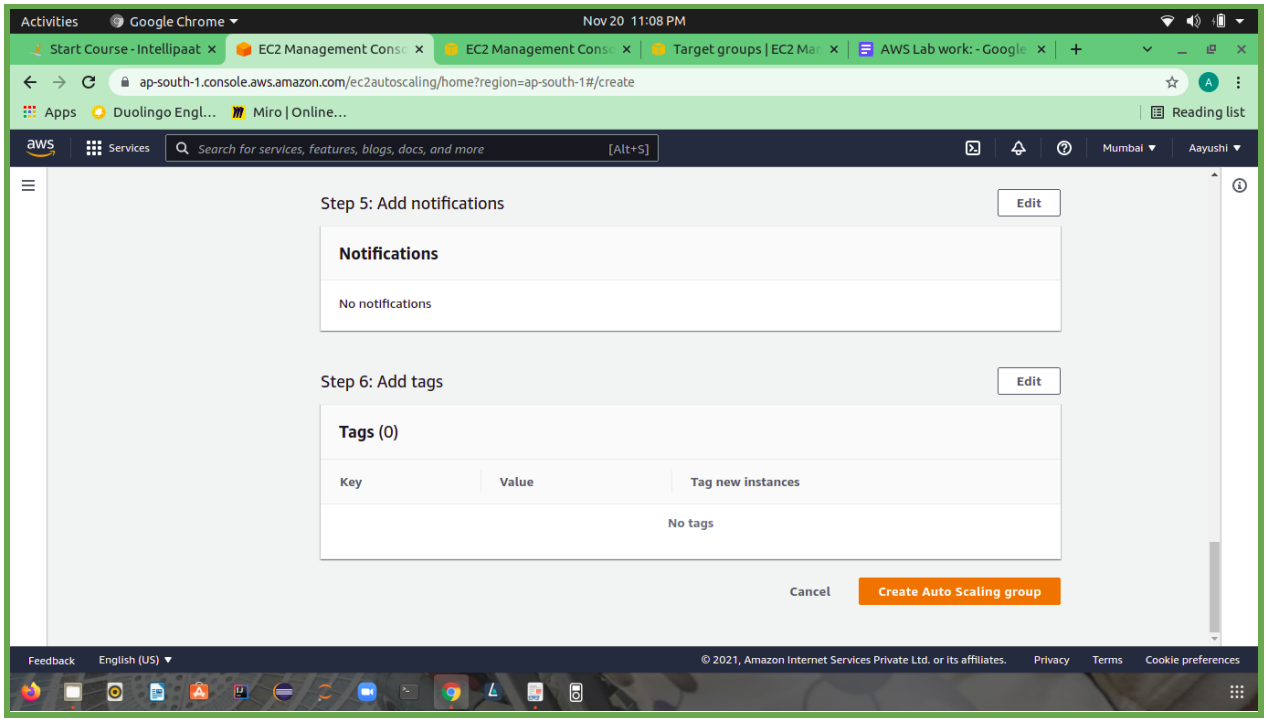
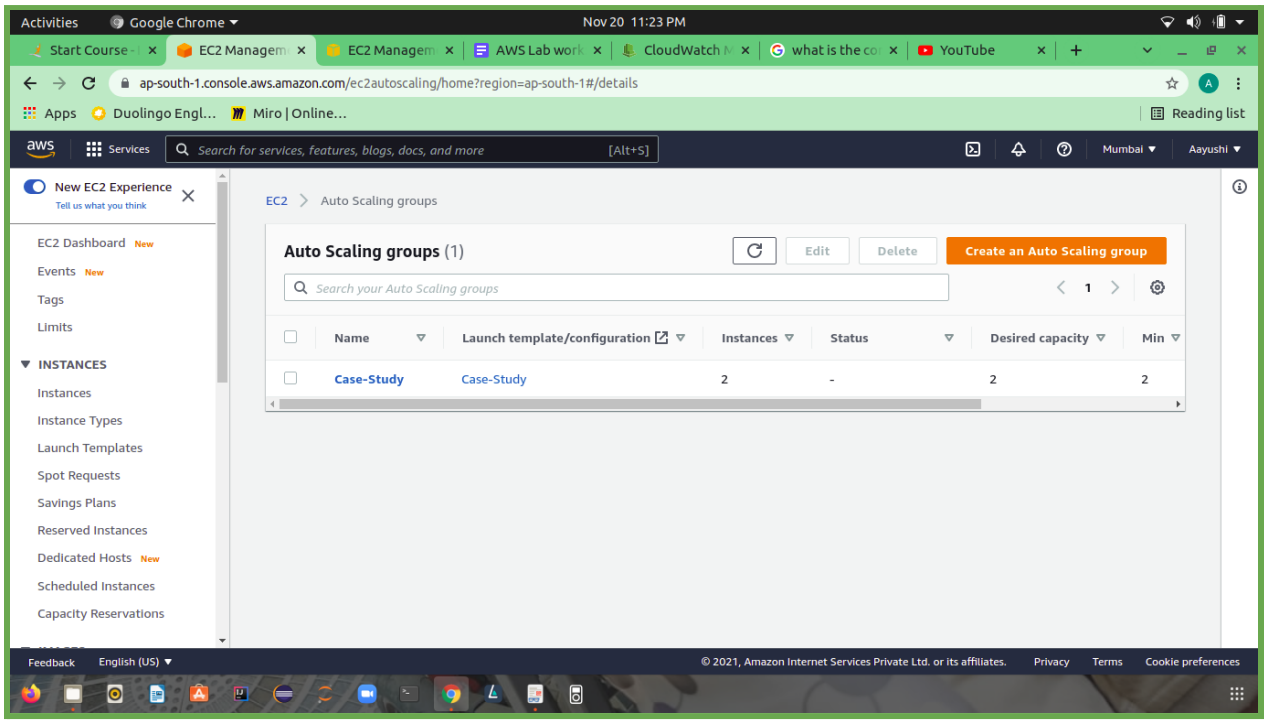
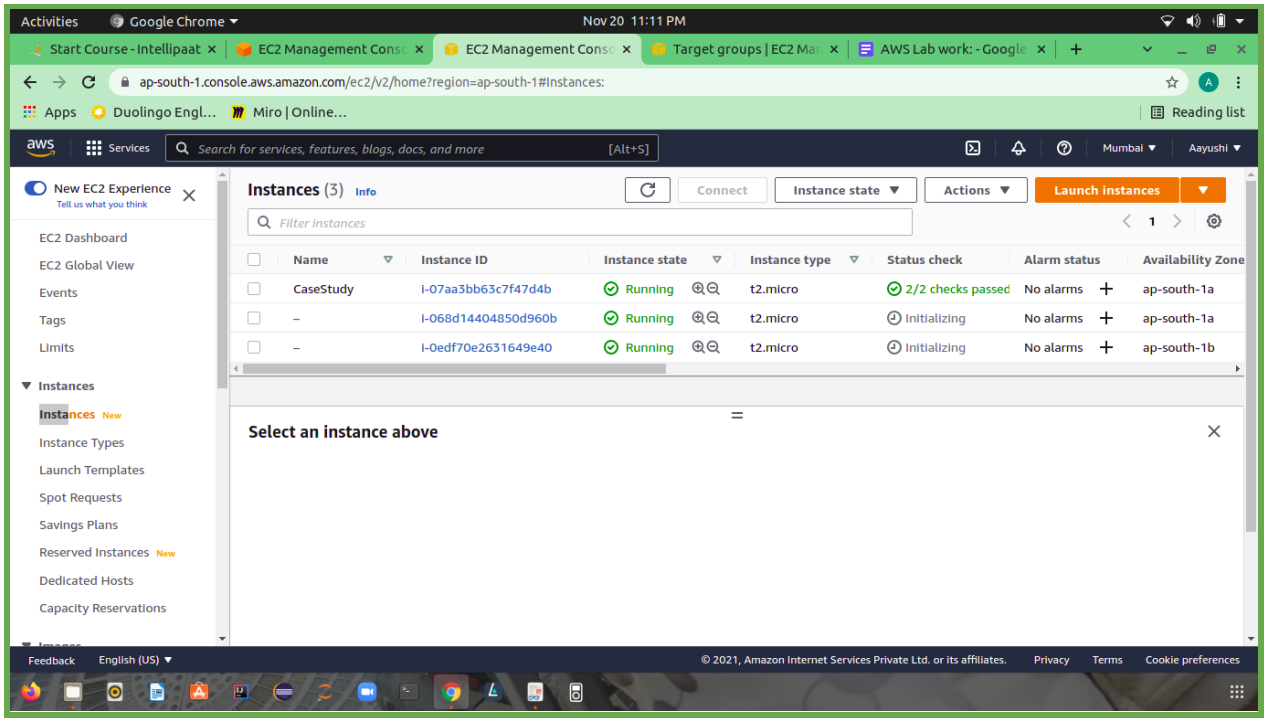
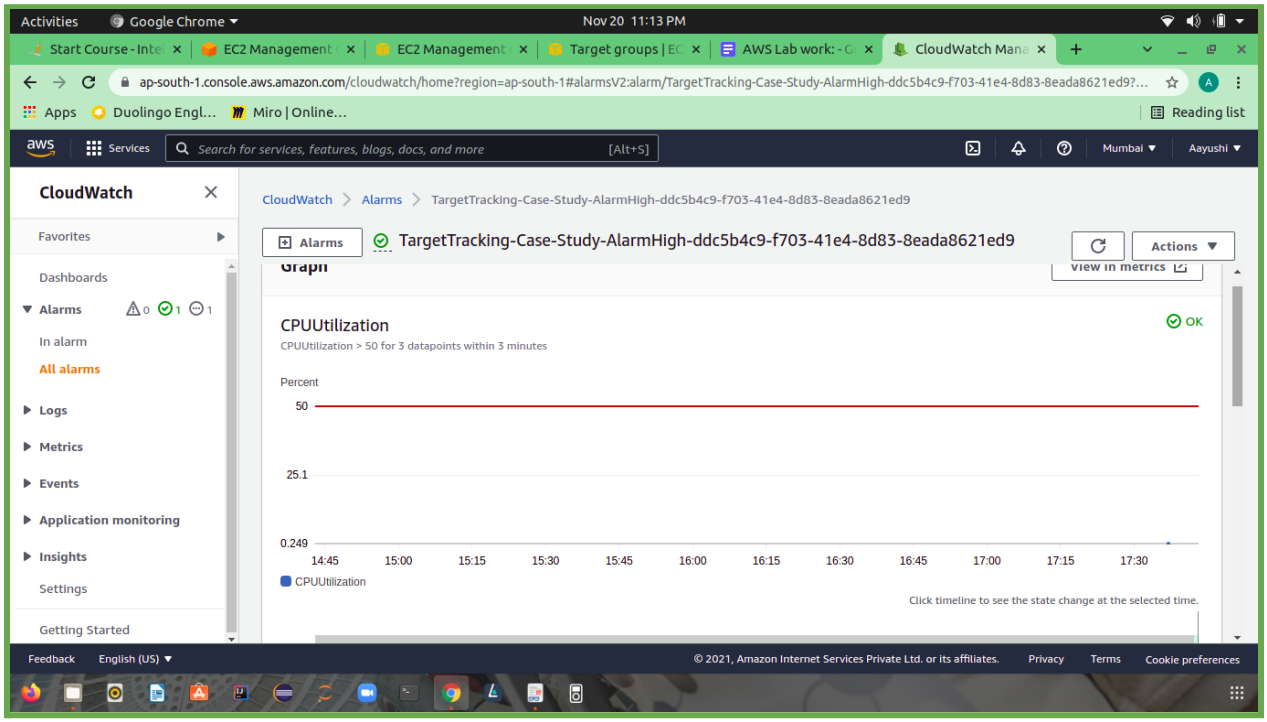




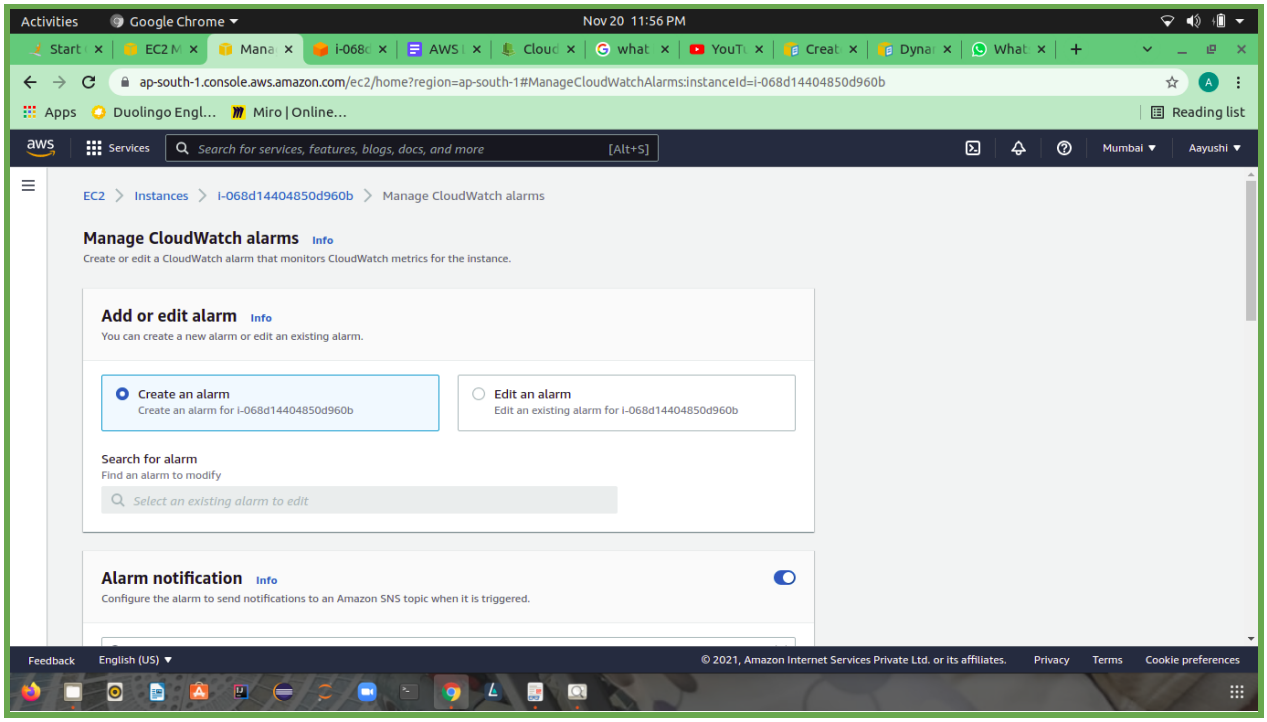
Now check the status instance has been created automatically



Analysis the status of cpu utilization by using cloud watch
Take remote to the instance and use below command and increase cpu utilization
sha1sum /dev/zero &



Create cloud watch alarms


Activities
Google Chrome
Nov 20 11:56 PM
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#ManageCloudWatchAlarms:instanceId=i-068d14404850d960b
Apps
Duolingo Engl...
Miro | Online...
Reading list
Services
Search for services, features, blogs, docs, and more
[Alt+S]
Mumbai
Aayushi
EC2 > Instances > i-068d14404850d960b > Manage CloudWatch alarms
Manage CloudWatch alarms Info
Create or edit a CloudWatch alarm that monitors CloudWatch metrics for the instance.
Add or edit alarm Info
You can create a new alarm or edit an existing alarm.
Create an alarm
Create an alarm for i-068d14404850d960b
Edit an alarm
Edit an existing alarm for i-068d14404850d960b
Search for alarm
Find an alarm to modify
Select an existing alarm to edit
Alarm notification Info
Configure the alarm to send notifications to an Amazon SNS topic when it is triggered.
Feedback
English (US)
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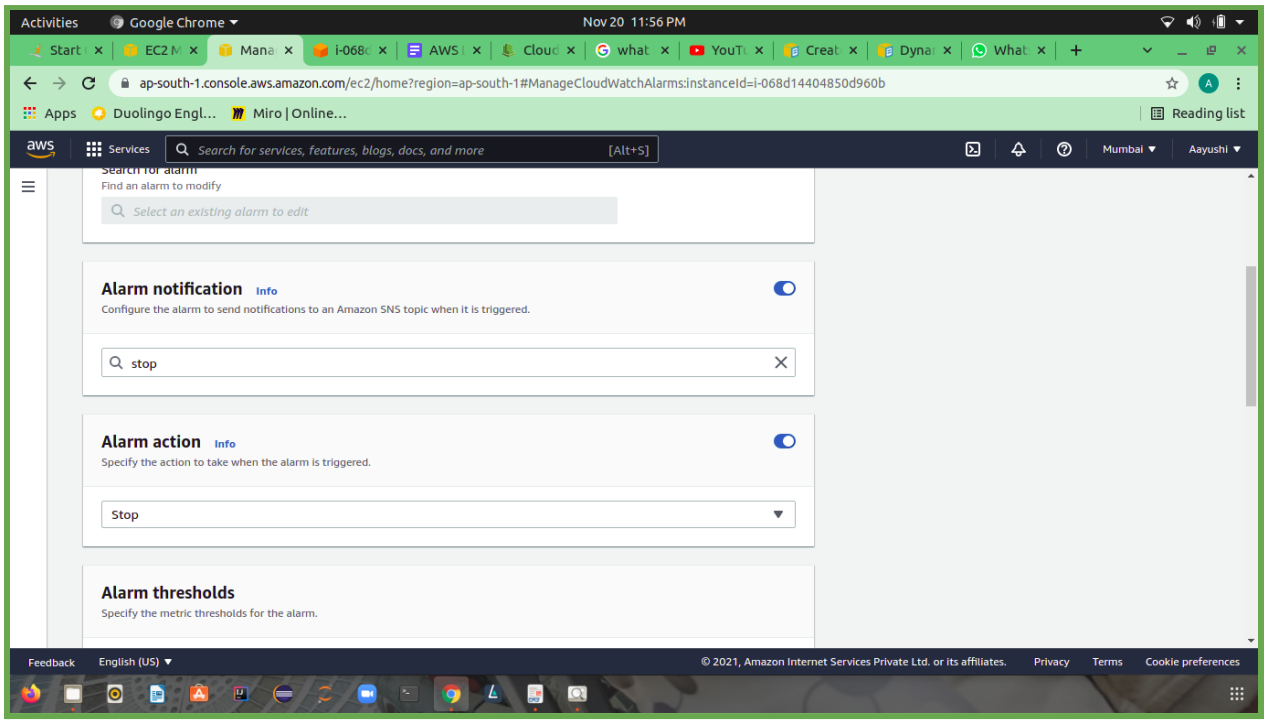
Activities
Google Chrome
Nov 20 11:56 PM
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#ManageCloudWatchAlarms:instanceId=i-068d14404850d960b
Apps
Duolingo Engl...
Miro | Online...
Reading list
Services
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Mumbai
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Find an alarm to modify
Select an existing alarm to edit
Alarm notification Info
Configure the alarm to send notifications to an Amazon SNS topic when it is triggered.
stop
Alarm action Info
Specify the action to take when the alarm is triggered.
Stop
Alarm thresholds
Specify the metric thresholds for the alarm.
Feedback
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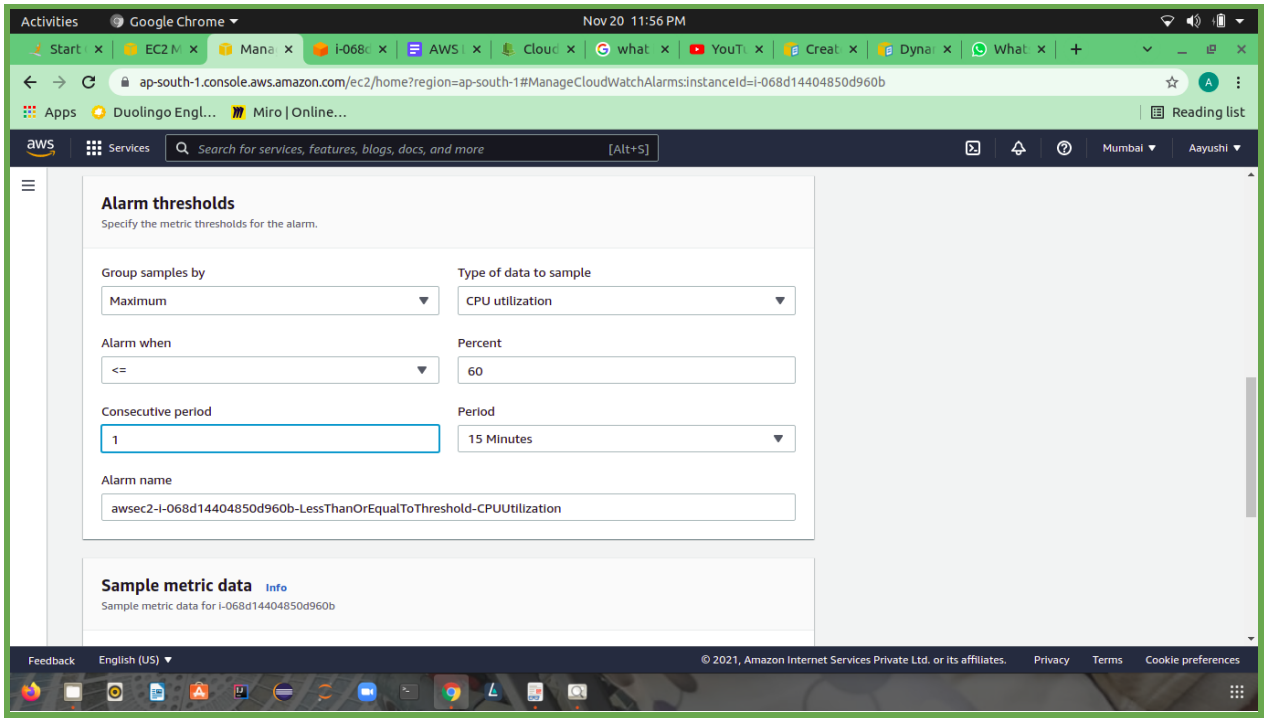
Activities
Google Chrome
Nov 20 11:56 PM
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#ManageCloudWatchAlarms:instanceId=i-068d14404850d960b
Apps
Duolingo Engl...
Miro | Online...
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Services
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Alarm thresholds
Specify the metric thresholds for the alarm.
Group samples by
Maximum
Type of data to sample
CPU utilization
Alarm when
<=
Percent
60
Consecutive period
1
Period
15 Minutes
Alarm name
awsec2-i-068d14404850d960b-LessThanOrEqualToThreshold-CPUUtilization
Sample metric data
Info
Sample metric data for i-068d14404850d960b
Feedback
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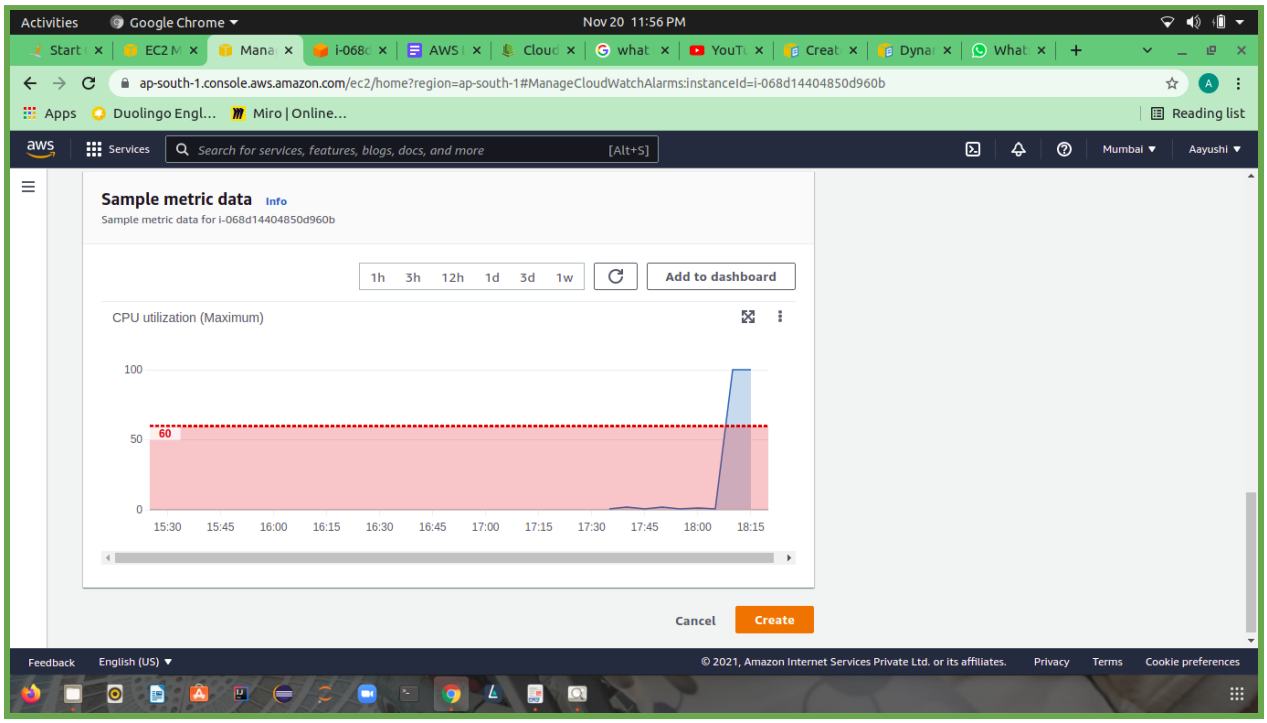
Activities
Google Chrome
Nov 20 11:56 PM
ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#ManageCloudWatchAlarms:instanceId=i-068d14404850d960b
Apps
Duolingo Engl...
Miro | Online...
Reading list
Services
Search for services, features, blogs, docs, and more
[Alt+S]
Mumbai
Aayushi
Sample metric data
Info
Sample metric data for i-068d14404850d960b
1h
3h
12h
1d
3d
1w
Add to dashboard
CPU utilization (Maximum)
100
50
0
60
15:30
15:45
16:00
16:15
16:30
16:45
17:00
17:15
17:30
17:45
18:00
18:15
Cancel
Create
Feedback
English (US)
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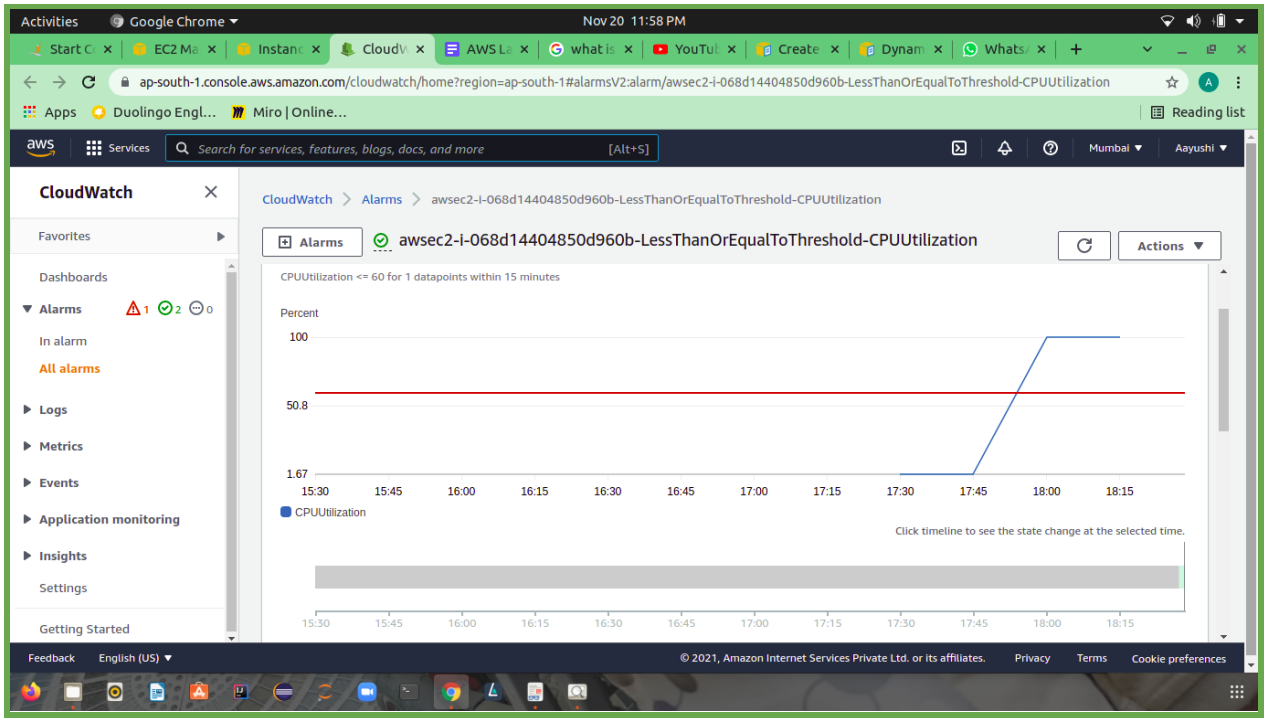
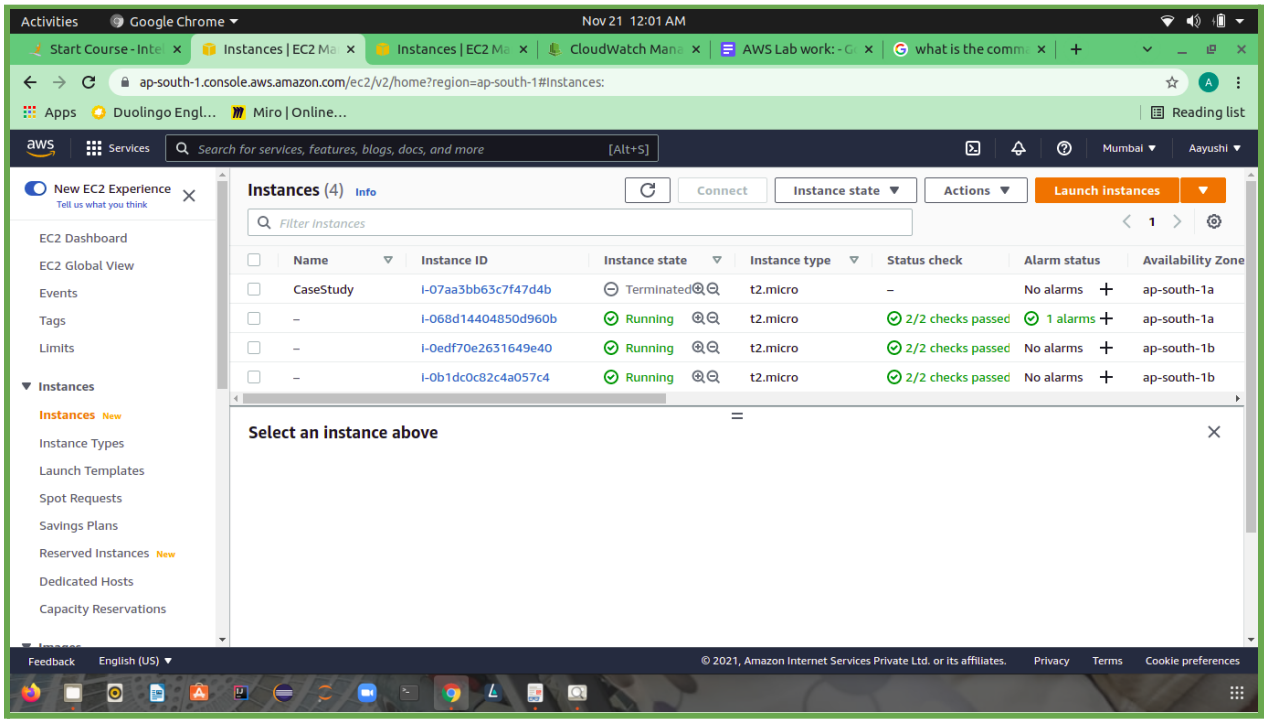
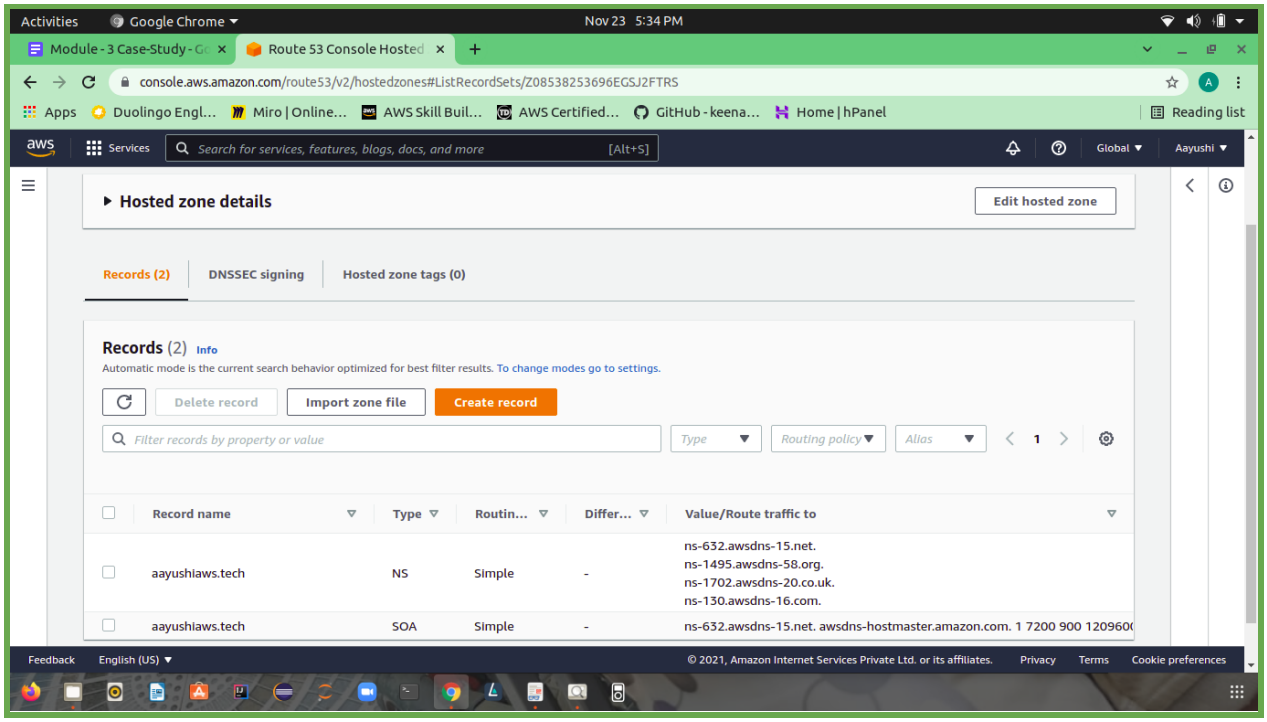


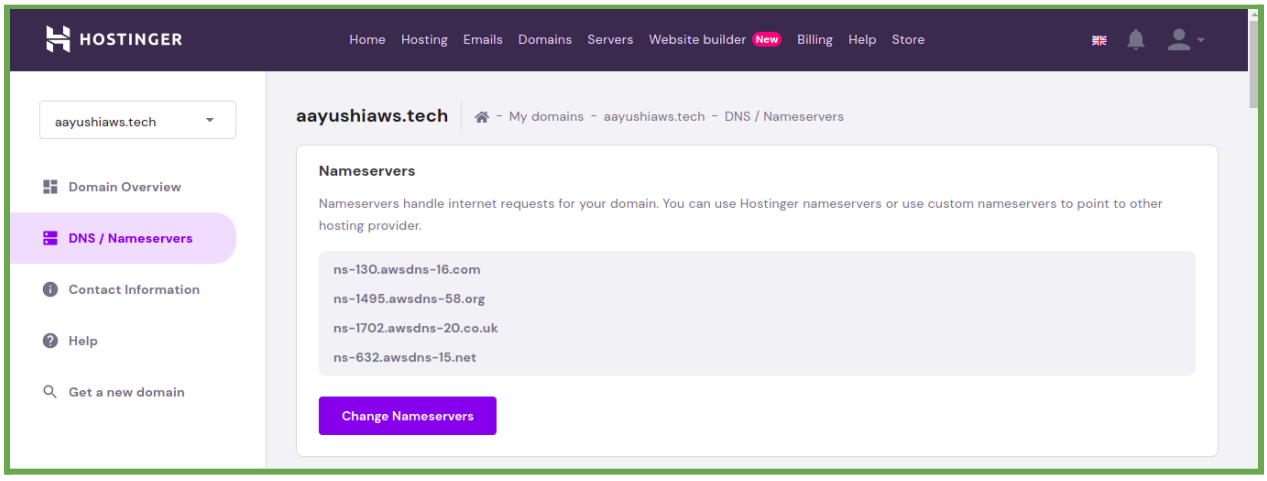
If cpu utilization below 60% you get a alarm then terminate instance automatically



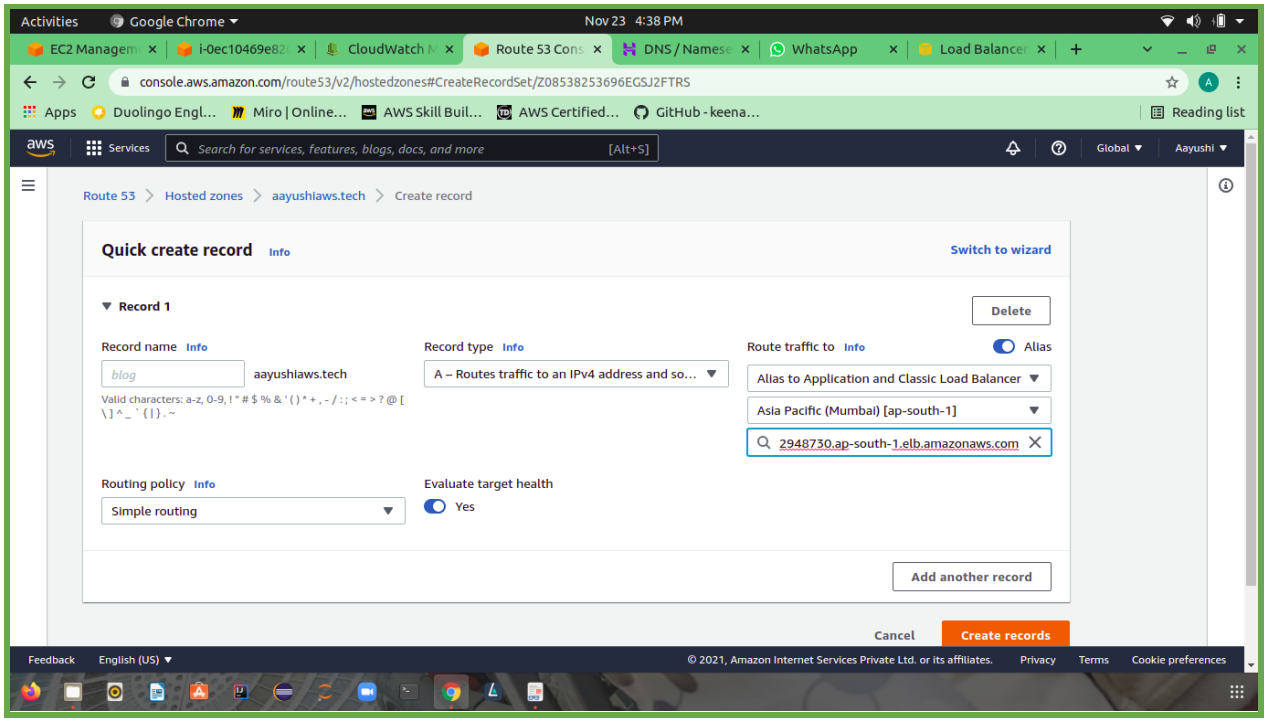
Now create route 53 to route the traffic by using domain aayushiaws.tech



Connect to the DNS



Create new record using alias


Activities
Google Chrome
Nov 23 4:38 PM
console.aws.amazon.com/route53/v2/hostedzones#CreateRecordSet/Z08538253696EGSJ2FTRS
Route 53 > Hosted zones > aayushiaws.tech > Create record
Quick create record Info
Switch to wizard
Record 1
Delete
Record name Info
blog
aayushiaws.tech
Record type Info
A – Routes traffic to an IPv4 address and so...
Route traffic to Info
Alias
Alias to Application and Classic Load Balancer
Asia Pacific (Mumbai) [ap-south-1]
2948730.ap-south-1.elb.amazonaws.com
Routing policy Info
Simple routing
Evaluate target health
Yes
Add another record
Cancel
Create records
Feedback
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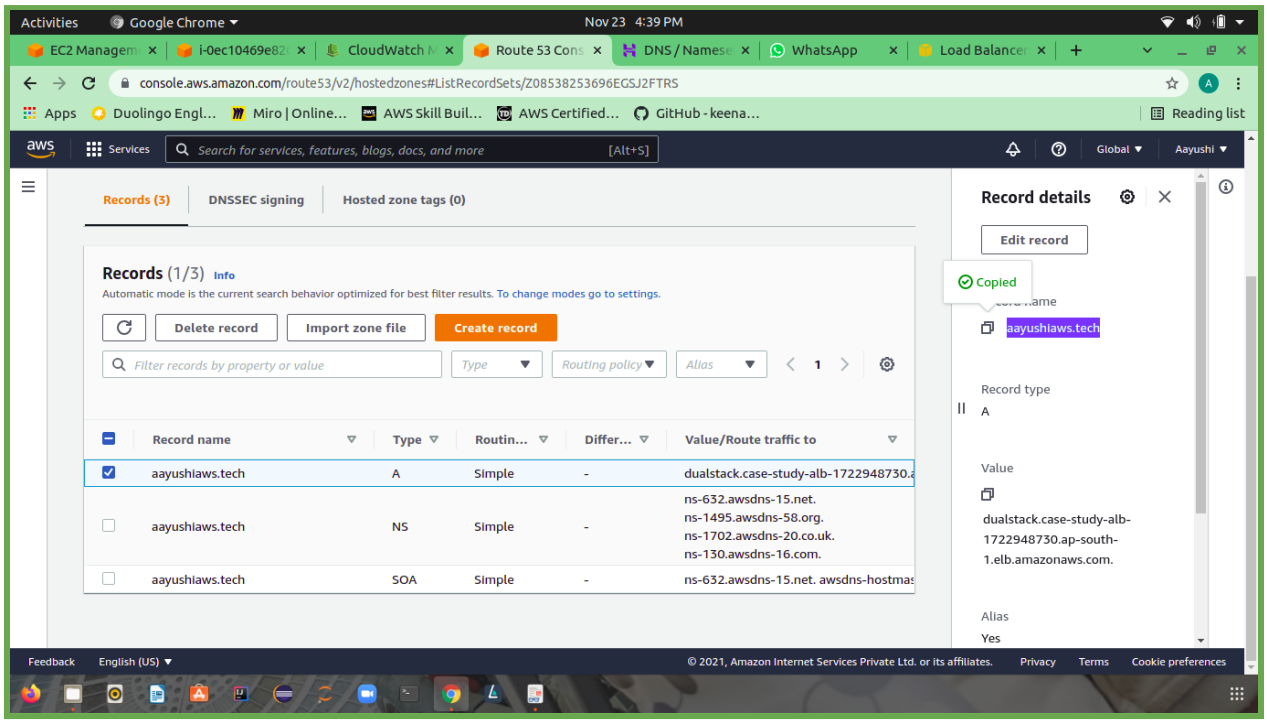
Activities
Google Chrome
Nov 23 4:39 PM
console.aws.amazon.com/route53/v2/hostedzones#ListRecordSets/Z08538253696EGSJ2FTRS
Records (3)
DNSSEC signing
Hosted zone tags (0)
Records (1/3) Info
Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.
Delete record
Import zone file
Create record
Filter records by property or value
Type
Routing policy
Alias
Record name
Type
Routin...
Differ...
Value/Route traffic to
aayushiaws.tech
A
Simple
-
dualstack.case-study-alb-1722948730.
aayushiaws.tech
NS
Simple
-
ns-632.awsdns-15.net.
ns-1495.awsdns-58.org.
ns-1702.awsdns-20.co.uk.
ns-130.awsdns-16.com.
aayushiaws.tech
SOA
Simple
-
ns-632.awsdns-15.net. awsdns-hostmas
Record details
Edit record
Copied
aayushiaws.tech
Record type
A
Value
dualstack.case-study-alb-1722948730.ap-south-1.elb.amazonaws.com.
Alias
Yes
Feedback
English (US)
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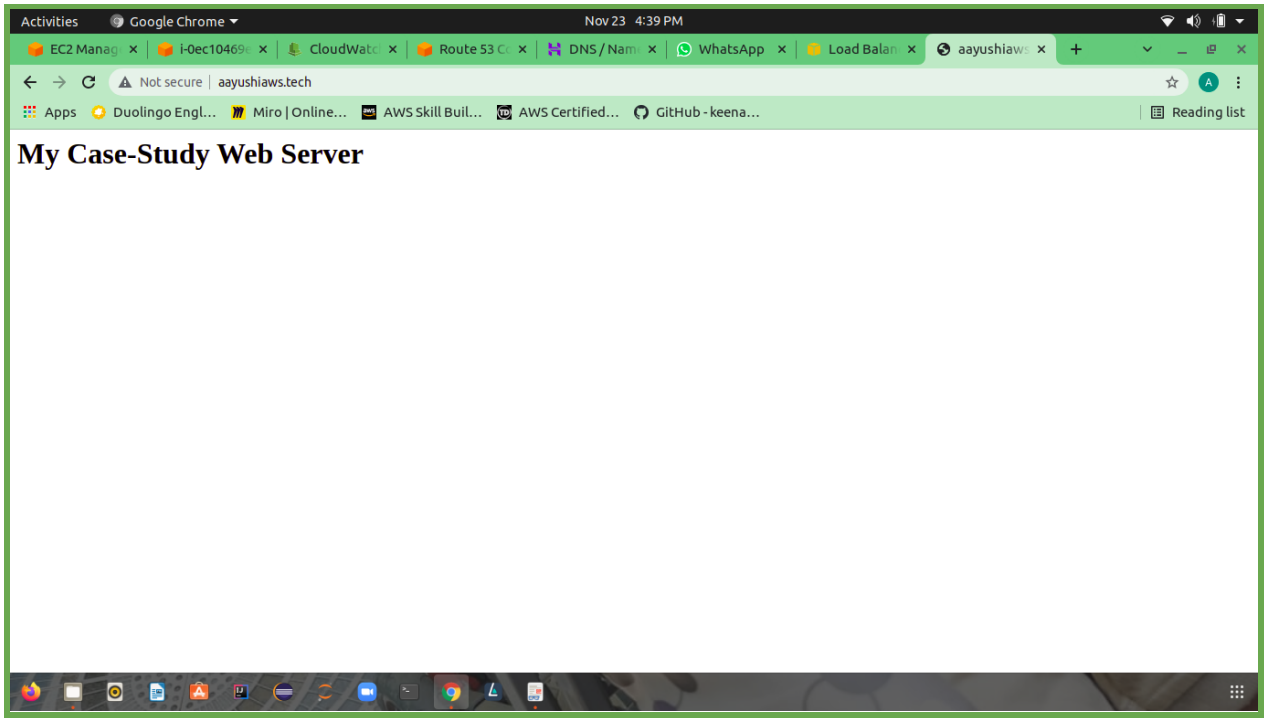
Activities
Google Chrome
Nov 23 4:39 PM
Not secure
aayushiaws.tech
Apps
Duolingo Engl...
Miro | Online...
AWS Skill Buil...
AWS Certified...
GitHub - keena...
Reading list
My Case-Study Web Server