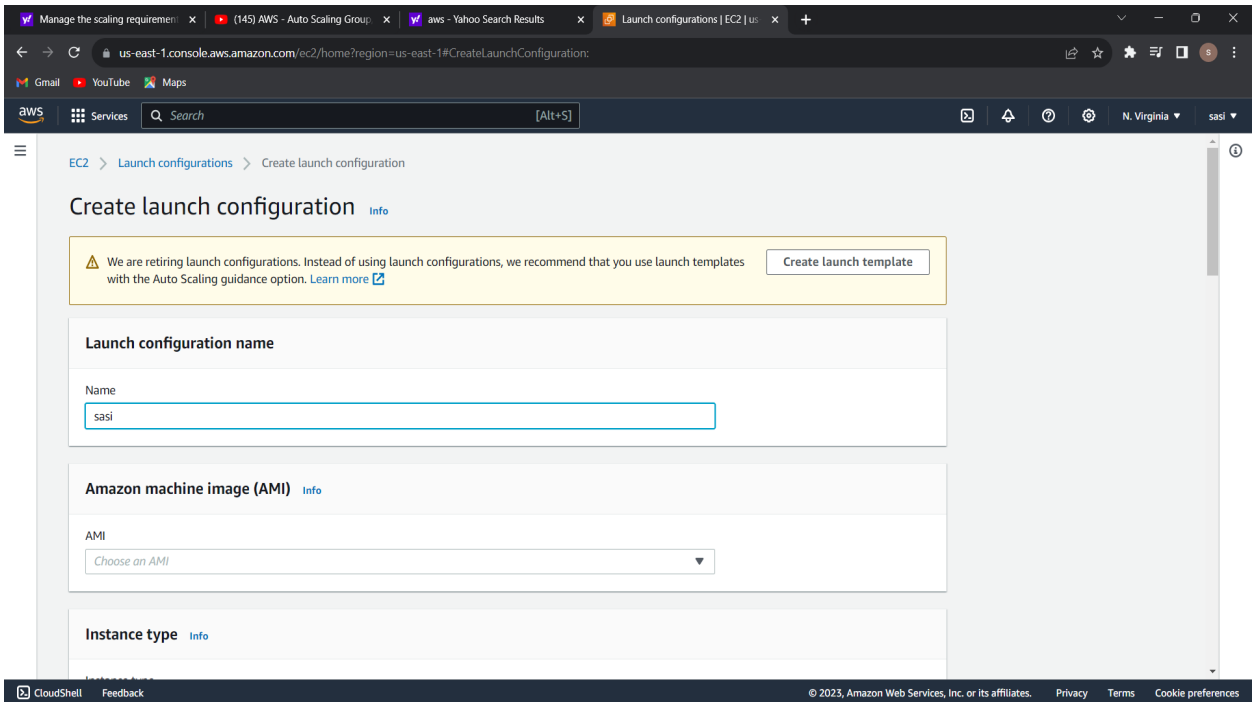
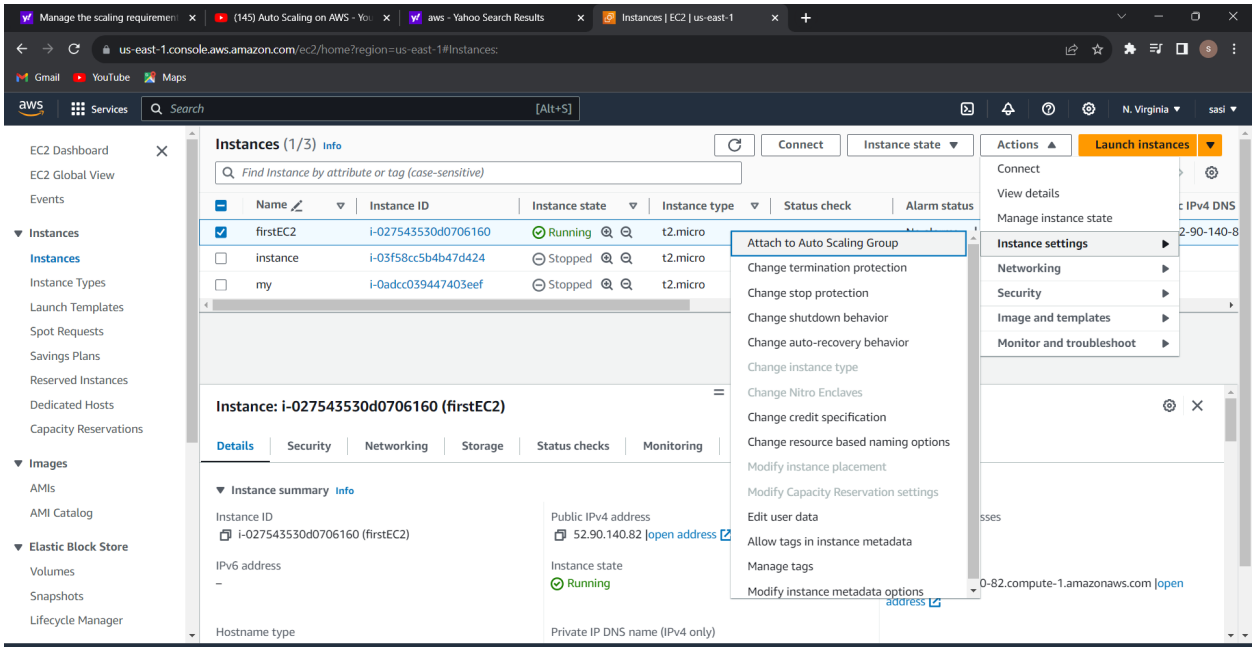
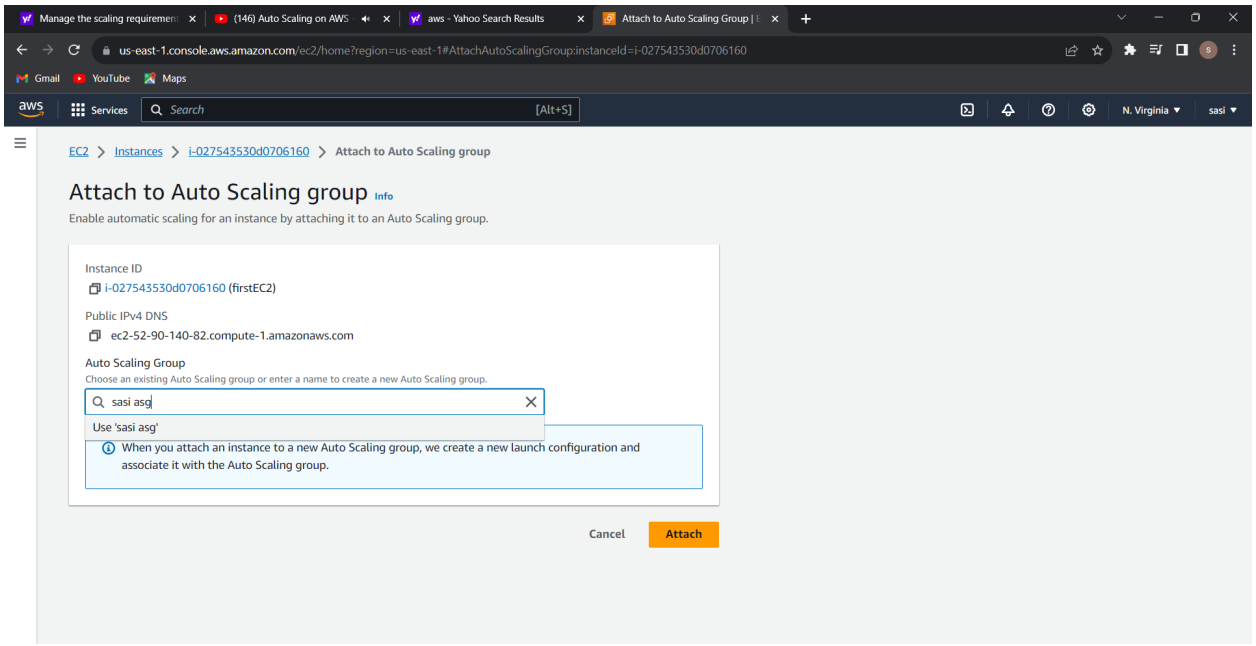
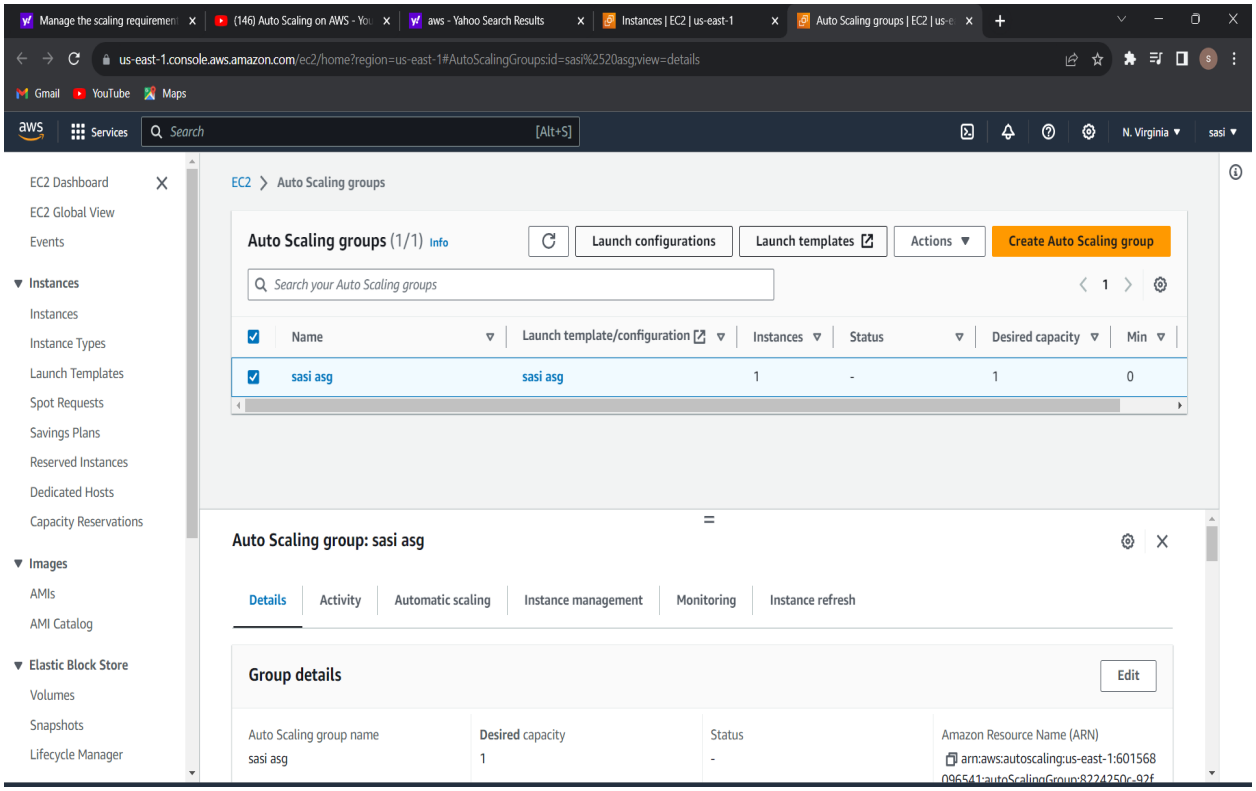
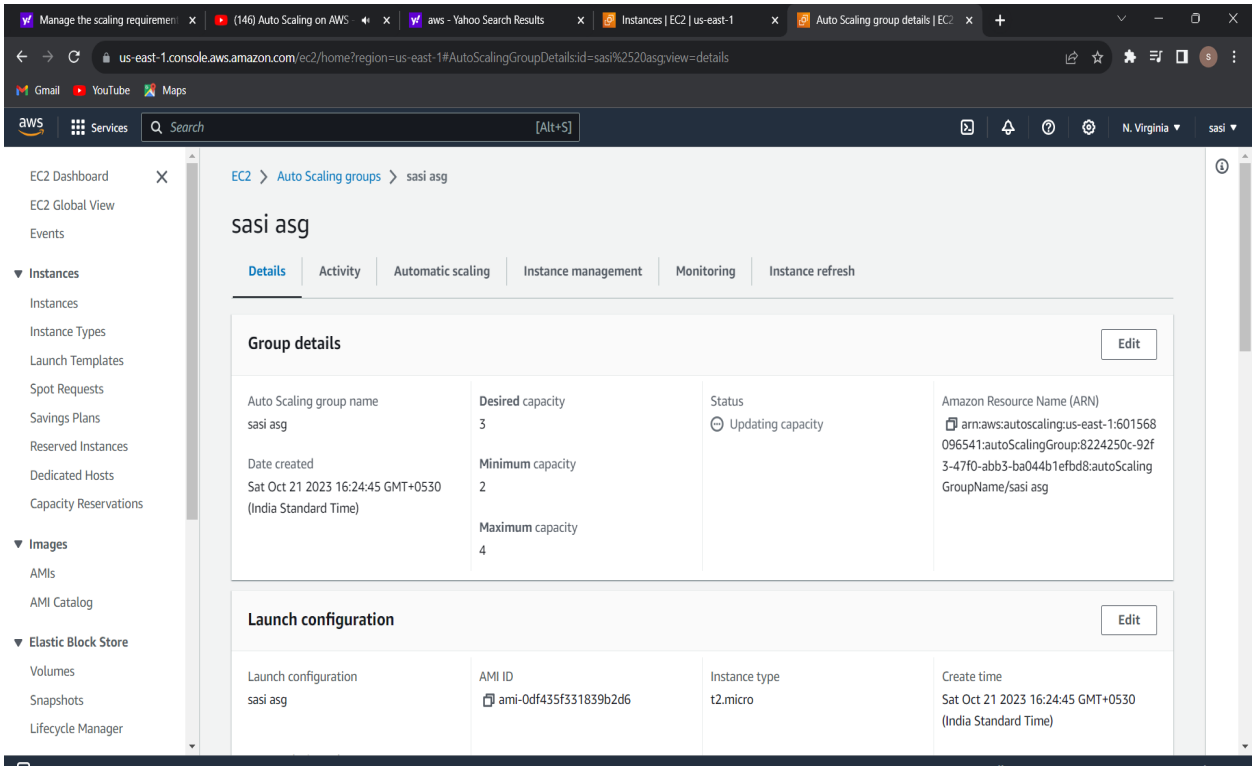
1. Manage the scaling requirements of the company by:
Deploying multiple compute resources on the cloud as soon as the load increases and the CPU utilization exceeds 80%
Removing the resources when the CPU utilization goes under 60%

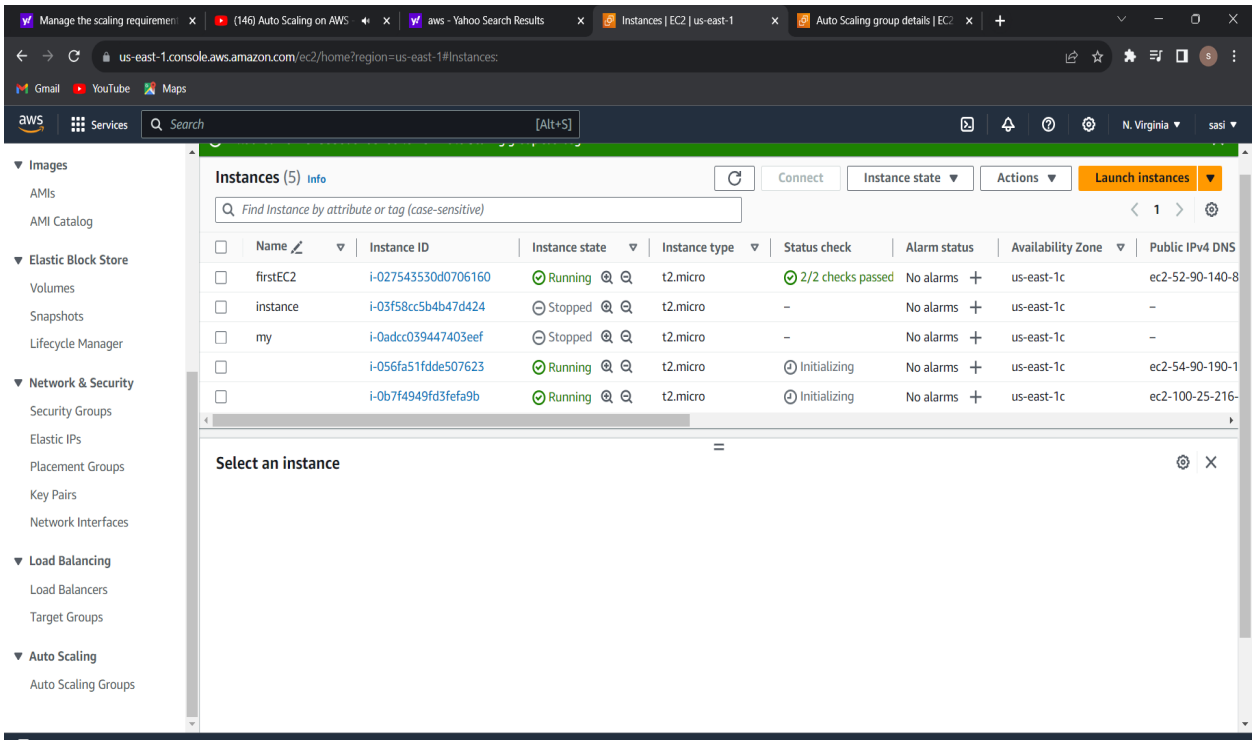


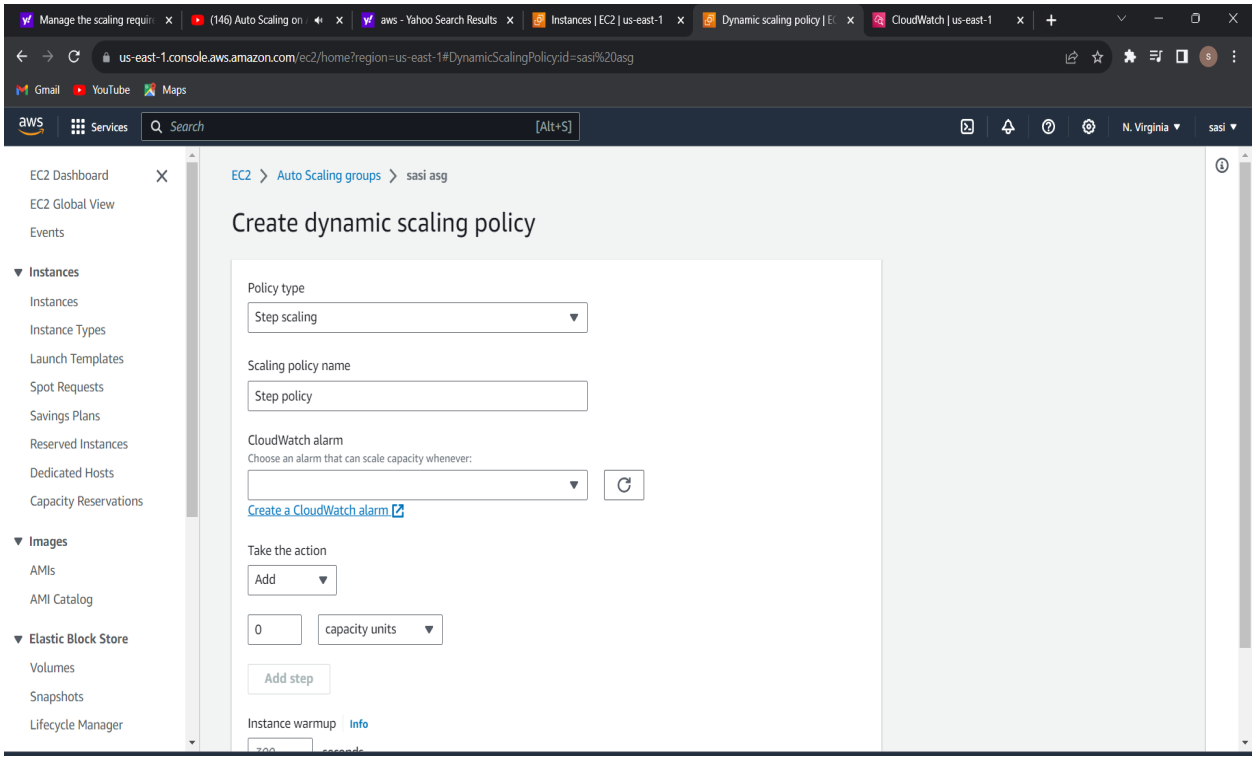


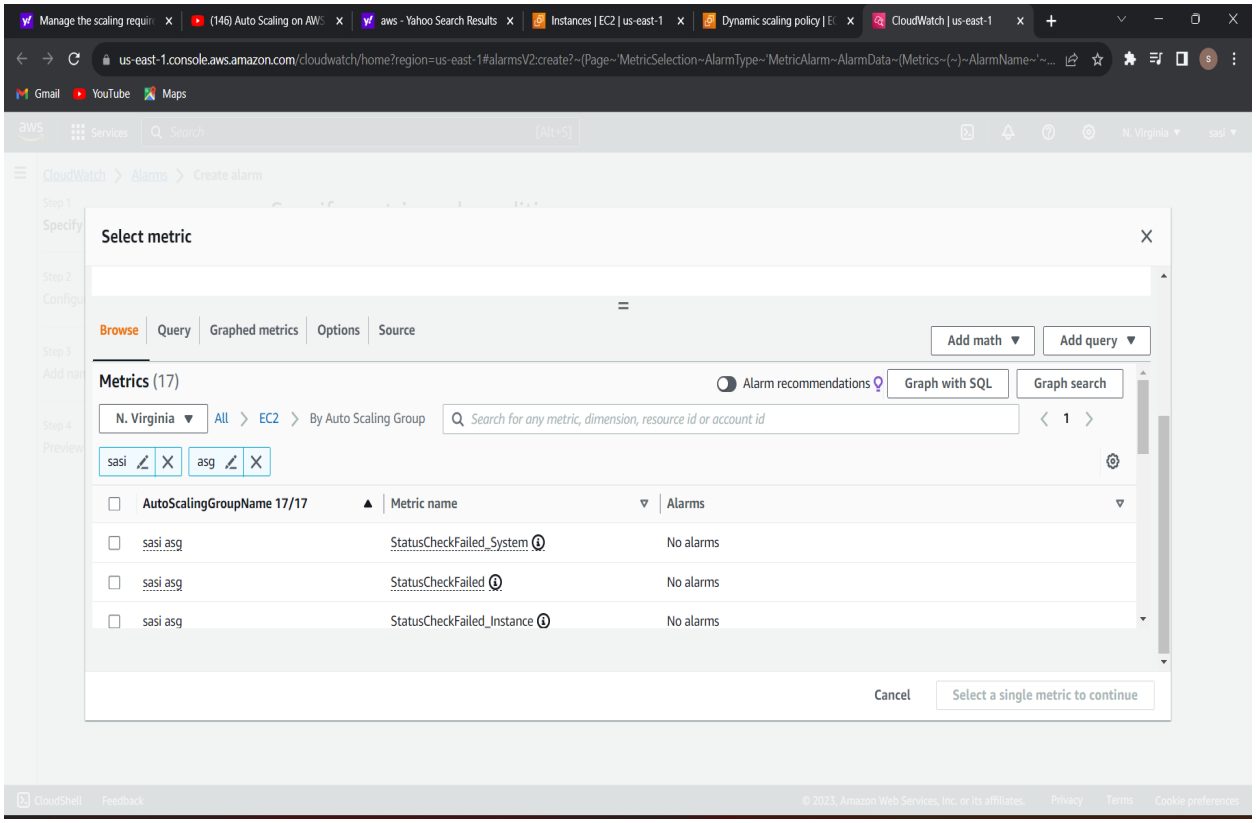

Manage the scaling requiremen
(146) Auto Scaling on AWS
aws - Yahoo Search Results
Attach to Auto Scaling Group
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#AttachAutoScalingGroup:instanceId=i-027543530d0706160
Gmail
YouTube
Maps
aws
Services
Search
[Alt+S]
N. Virginia
sasi
EC2 > Instances > i-027543530d0706160 > Attach to Auto Scaling group
Attach to Auto Scaling group Info
Enable automatic scaling for an instance by attaching it to an Auto Scaling group.
Instance ID
i-027543530d0706160 (firstEC2)
Public IPv4 DNS
ec2-52-90-140-82.compute-1.amazonaws.com
Auto Scaling Group
Choose an existing Auto Scaling group or enter a name to create a new Auto Scaling group.
sasi asg
Use 'sasi asg'
When you attach an instance to a new Auto Scaling group, we create a new launch configuration and associate it with the Auto Scaling group.
Cancel
Attach

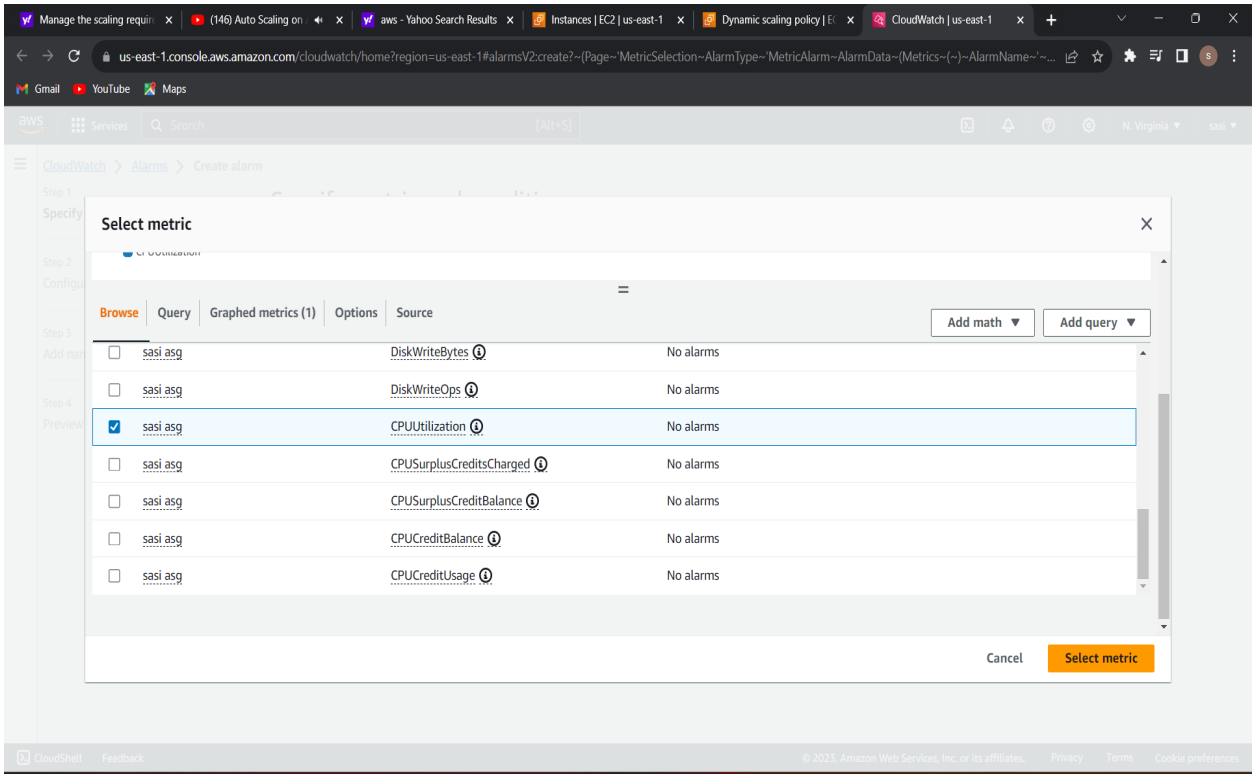

Manage the scaling requiremen
(146) Auto Scaling on AWS - You
aws - Yahoo Search Results
Instances | EC2 | us-east-1
Auto Scaling groups | EC2 | us-e
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#AutoScalingGroups:id=sasi%2520asg;view=details
Gmail
YouTube
Maps
aws
Services
Search
[Alt+S]
N. Virginia
sasi
EC2 Dashboard
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
Lifecycle Manager
EC2 > Auto Scaling groups
Auto Scaling groups (1/1) Info
Launch configurations
Launch templates
Actions
Create Auto Scaling group
Search your Auto Scaling groups
1
Name
Launch template/configuration
Instances
Status
Desired capacity
Min
sasi asg
sasi asg
1
-
1
0
Auto Scaling group: sasi asg
Details
Activity
Automatic scaling
Instance management
Monitoring
Instance refresh
Group details
Edit
Auto Scaling group name
sasi asg
Desired capacity
1
Status
-
Amazon Resource Name (ARN)
arn:aws:autoscaling:us-east-1:601568
096541:autoScalingGroup:8224250c-92f

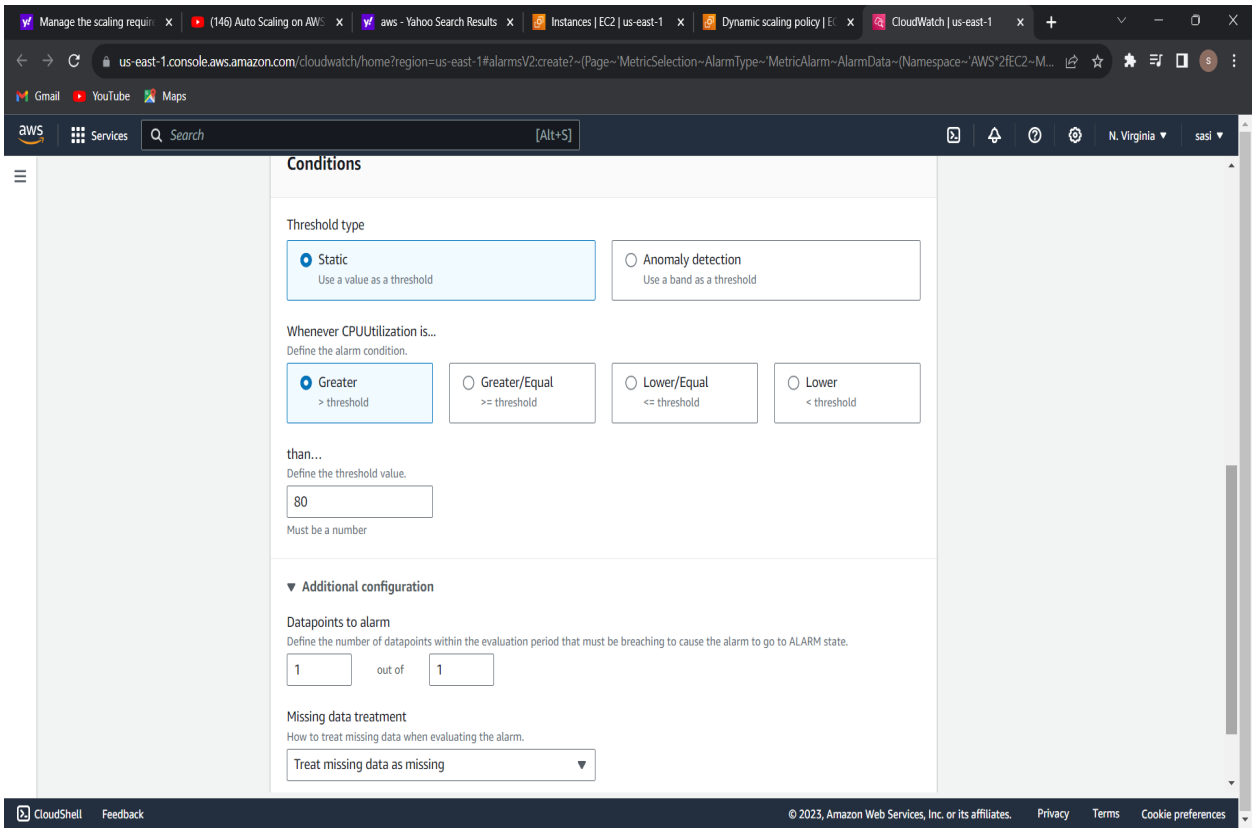

Manage the scaling requiremen
(146) Auto Scaling on AWS
aws - Yahoo Search Results
Instances | EC2 | us-east-1
Auto Scaling group details | EC2
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#AutoScalingGroupDetails:id=sasi%2520asg;view=details
Gmail
YouTube
Maps
Services
Search
[Alt+S]
N. Virginia
sasi
EC2 Dashboard
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
Lifecycle Manager
EC2 > Auto Scaling groups > sasi asg
sasi asg
Details
Activity
Automatic scaling
Instance management
Monitoring
Instance refresh
Group details
Edit
Auto Scaling group name
sasi asg
Desired capacity
3
Minimum capacity
2
Maximum capacity
4
Status
Updating capacity
Amazon Resource Name (ARN)
arn:aws:autoscaling:us-east-1:601568096541:autoScalingGroup:8224250c-92f3-47f0-abb3-ba044b1efbd8:autoScalingGroupName/sasi asg
Date created
Sat Oct 21 2023 16:24:45 GMT+0530 (India Standard Time)
Launch configuration
Edit
Launch configuration
sasi asg
AMI ID
ami-0df435f331839b2d6
Instance type
t2.micro
Create time
Sat Oct 21 2023 16:24:45 GMT+0530 (India Standard Time)


Manage the scaling requiremen
(146) Auto Scaling on AWS
aws - Yahoo Search Results
Instances | EC2 | us-east-1
Auto Scaling group details | EC2
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:
Gmail
YouTube
Maps
Services
Search
[Alt+S]
N. Virginia
sasi
Images
AMIs
AMI Catalog
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
Auto Scaling
Auto Scaling Groups
Instances (5) Info
Connect
Instance state
Actions
Launch instances
Find Instance by attribute or tag (case-sensitive)
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
Public IPv4 DNS
firstEC2 i-027543530d0706160 Running t2.micro 2/2 checks passed No alarms us-east-1c ec2-52-90-140-8
instance i-03f58cc5b4b47d424 Stopped t2.micro - No alarms us-east-1c -
my i-0adcc039447403eef Stopped t2.micro - No alarms us-east-1c -
i-056fa51fdde507623 Running t2.micro Initializing No alarms us-east-1c ec2-54-90-190-1
i-0b7f4949fd3fefa9b Running t2.micro Initializing No alarms us-east-1c ec2-100-25-216-
Select an instance


Manage the scaling requir
(146) Auto Scaling on
aws - Yahoo Search Results
Instances | EC2 | us-east-1
Dynamic scaling policy | E
CloudWatch | us-east-1
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#DynamicScalingPolicyId=sasi%20asg
Gmail
YouTube
Maps
aws
Services
Search
[Alt+S]
N. Virginia
sasi
EC2 Dashboard
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
Lifecycle Manager
EC2 > Auto Scaling groups > sasi asg
Create dynamic scaling policy
Policy type
Step scaling
Scaling policy name
Step policy
CloudWatch alarm
Choose an alarm that can scale capacity whenever:
Create a CloudWatch alarm
Take the action
Add
0
capacity units
Add step
Instance warmup
Info


Manage the scaling requir
(146) Auto Scaling on AW
aws - Yahoo Search Results
Instances | EC2 | us-east-1
Dynamic scaling policy | E
CloudWatch | us-east-1
us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#alarmsV2:create?~(Page~'MetricSelection~AlarmType~'MetricAlarm~AlarmData~(Metrics~(~)~AlarmName~'~...
Gmail
YouTube
Maps
CloudWatch > Alarms > Create alarm
Select metric
Browse
Query
Graphed metrics
Options
Source
Add math
Add query
Metrics (17)
Alarm recommendations
Graph with SQL
Graph search
N. Virginia
All > EC2 > By Auto Scaling Group
Search for any metric, dimension, resource id or account id
1
sasi
asg
AutoScalingGroupName 17/17
Metric name
Alarms
sasi asg
StatusCheckFailed_System
No alarms
sasi asg
StatusCheckFailed
No alarms
sasi asg
StatusCheckFailed_Instance
No alarms
Cancel
Select a single metric to continue
CloudShell
Feedback
© 2023, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


Select metric
Browse
Query
Graphed metrics (1)
Options
Source
Add math
Add query
sasi asg DiskWriteBytes No alarms
sasi asg DiskWriteOps No alarms
sasi asg CPUUtilization No alarms
sasi asg CPUSurplusCreditsCharged No alarms
sasi asg CPUSurplusCreditBalance No alarms
sasi asg CPUCreditBalance No alarms
sasi asg CPUCreditUsage No alarms
Cancel
Select metric


Conditions
Threshold type
Static
Use a value as a threshold
Anomaly detection
Use a band as a threshold
Whenever CPUUtilization is...
Define the alarm condition.
Greater
> threshold
Greater/Equal
>= threshold
Lower/Equal
<= threshold
Lower
< threshold
than...
Define the threshold value.
80
Must be a number
Additional configuration
Datapoints to alarm
Define the number of datapoints within the evaluation period that must be breaching to cause the alarm to go to ALARM state.
1
out of
1
Missing data treatment
How to treat missing data when evaluating the alarm.
Treat missing data as missing
CloudShell
Feedback
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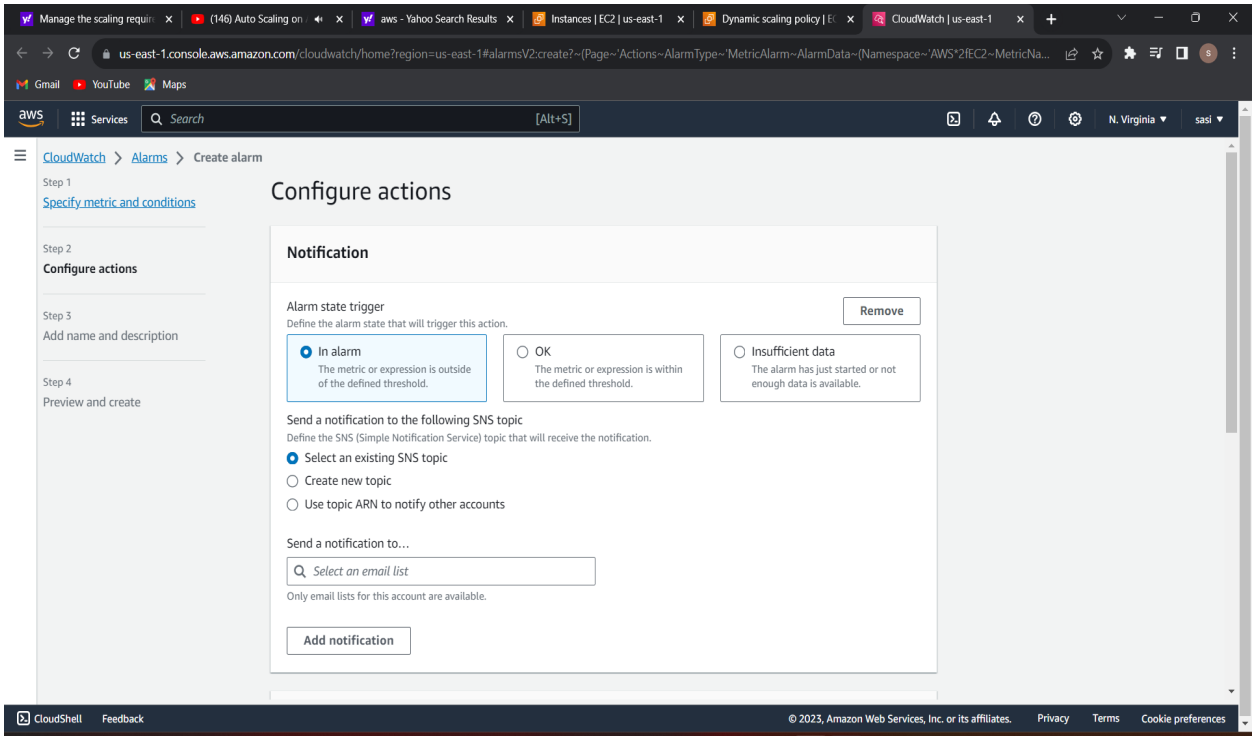
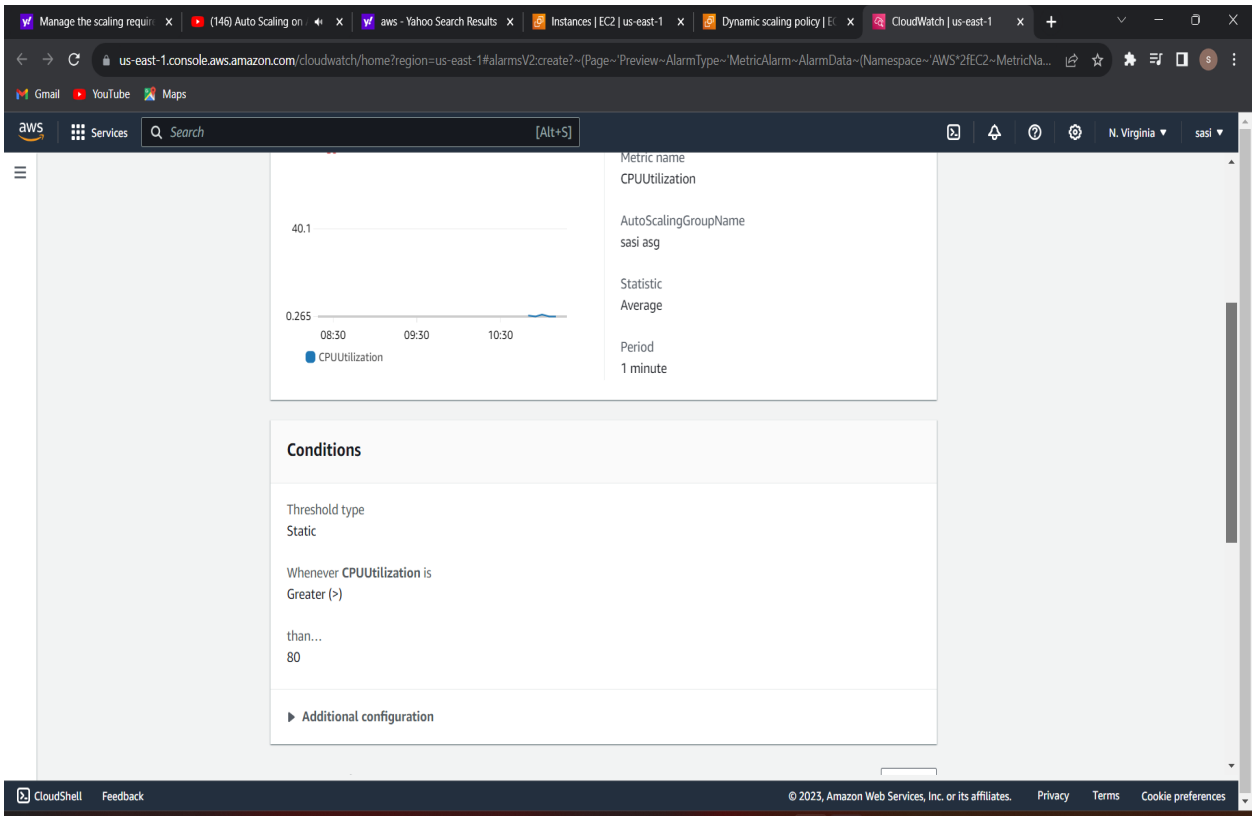
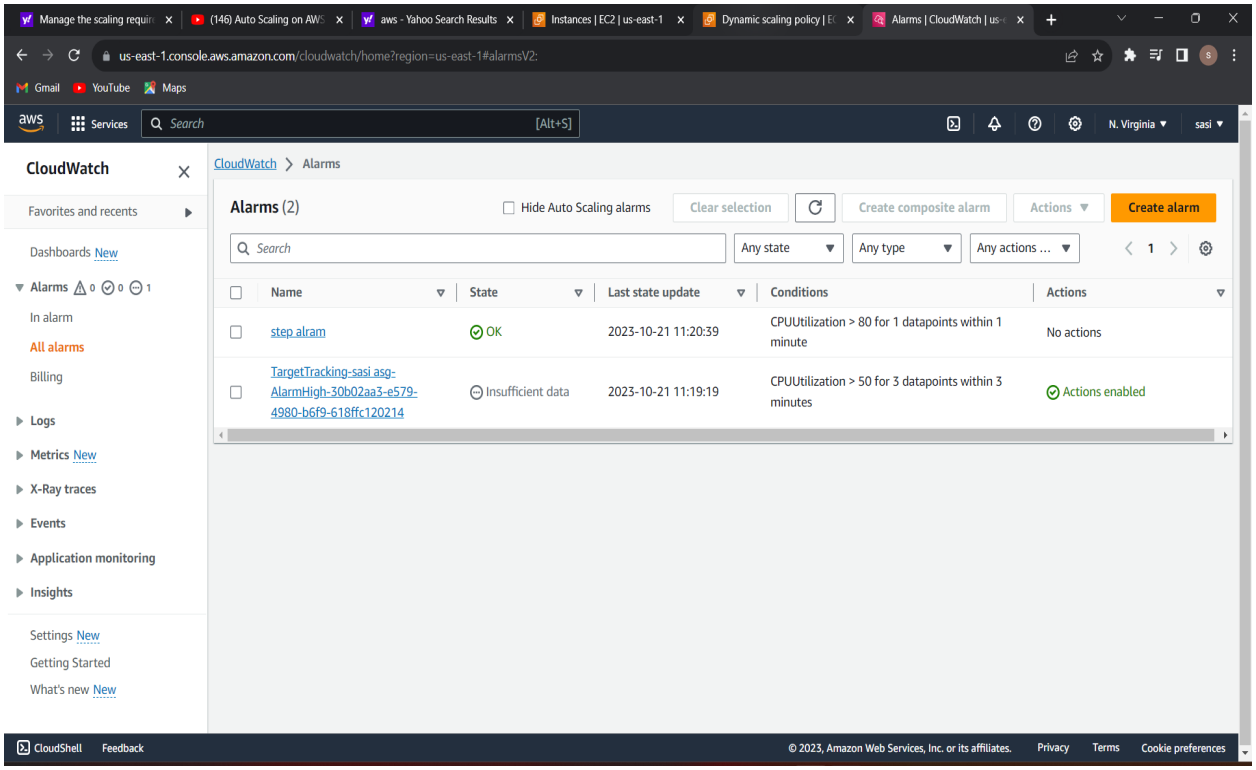
Privacy
Terms
Cookie preferences


Manage the scaling requir
(146) Auto Scaling on
aws - Yahoo Search Results
Instances | EC2 | us-east-1
Dynamic scaling policy | E
CloudWatch | us-east-1
us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#alarmsV2:create?~(Page~'Actions~AlarmType~'MetricAlarm~AlarmData~(Namespace~'AWS*2fEC2~MetricNa...
Gmail
YouTube
Maps
aws
Services
Search
[Alt+S]
N. Virginia
sasi
CloudWatch
Alarms
Create alarm
Step 1
Specify metric and conditions
Step 2
Configure actions
Step 3
Add name and description
Step 4
Preview and create
Configure actions
Notification
Alarm state trigger
Define the alarm state that will trigger this action.
Remove
In alarm
The metric or expression is outside of the defined threshold.
OK
The metric or expression is within the defined threshold.
Insufficient data
The alarm has just started or not enough data is available.
Send a notification to the following SNS topic
Define the SNS (Simple Notification Service) topic that will receive the notification.
Select an existing SNS topic
Create new topic
Use topic ARN to notify other accounts
Send a notification to...
Select an email list
Only email lists for this account are available.
Add notification
CloudShell
Feedback
© 2023, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


Manage the scaling requir
(146) Auto Scaling on
aws - Yahoo Search Results
Instances | EC2 | us-east-1
Dynamic scaling policy | E
CloudWatch | us-east-1
us-east-1.console.aws.amazon.com/cloudwatch/home?region=us-east-1#alarmsV2:create?~(Page~'Preview~AlarmType~'MetricAlarm~AlarmData~(Namespace~'AWS*2fEC2~MetricNa...
Gmail
YouTube
Maps
aws
Services
Search
[Alt+S]
N. Virginia
sasi
40.1
0.265
08:30
09:30
10:30
CPUUtilization
Metric name
CPUUtilization
AutoScalingGroupName
sasi asg
Statistic
Average
Period
1 minute
Conditions
Threshold type
Static
Whenever CPUUtilization is
Greater (>)
than...
80
Additional configuration
CloudShell
Feedback
© 2023, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


CloudWatch
Favorites and recents
Dashboards New
Alarms 0 0 1
In alarm
All alarms
Billing
Logs
Metrics New
X-Ray traces
Events
Application monitoring
Insights
Settings New
Getting Started
What's new New
CloudWatch > Alarms
Alarms (2)
Hide Auto Scaling alarms
Clear selection
Create composite alarm
Actions
Create alarm
Search
Any state
Any type
Any actions ...
Name
State
Last state update
Conditions
Actions
step alram
OK
2023-10-21 11:20:39
CPUUtilization > 80 for 1 datapoints within 1 minute
No actions
TargetTracking-sasi asg-AlarmHigh-30b02aa3-e579-4980-b6f9-618ffc120214
Insufficient data
2023-10-21 11:19:19
CPUUtilization > 50 for 3 datapoints within 3 minutes
Actions enabled
CloudShell
Feedback
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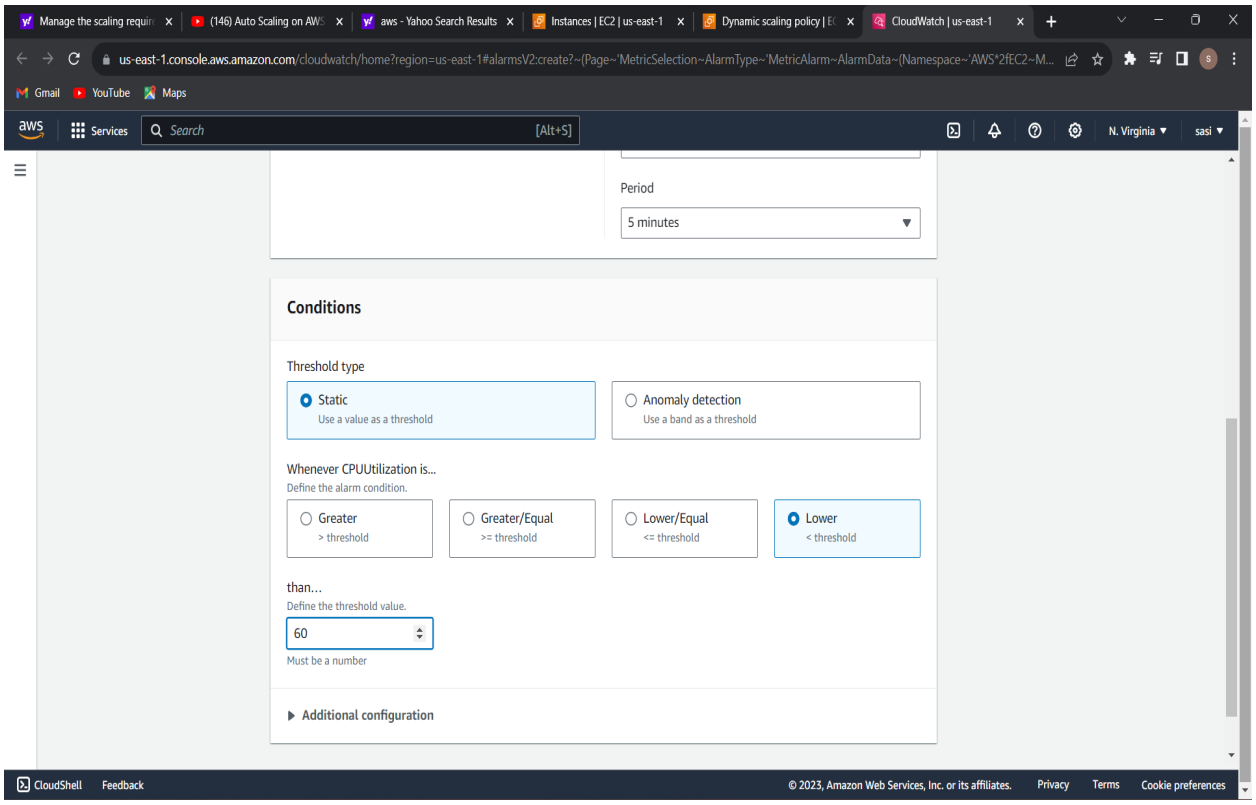
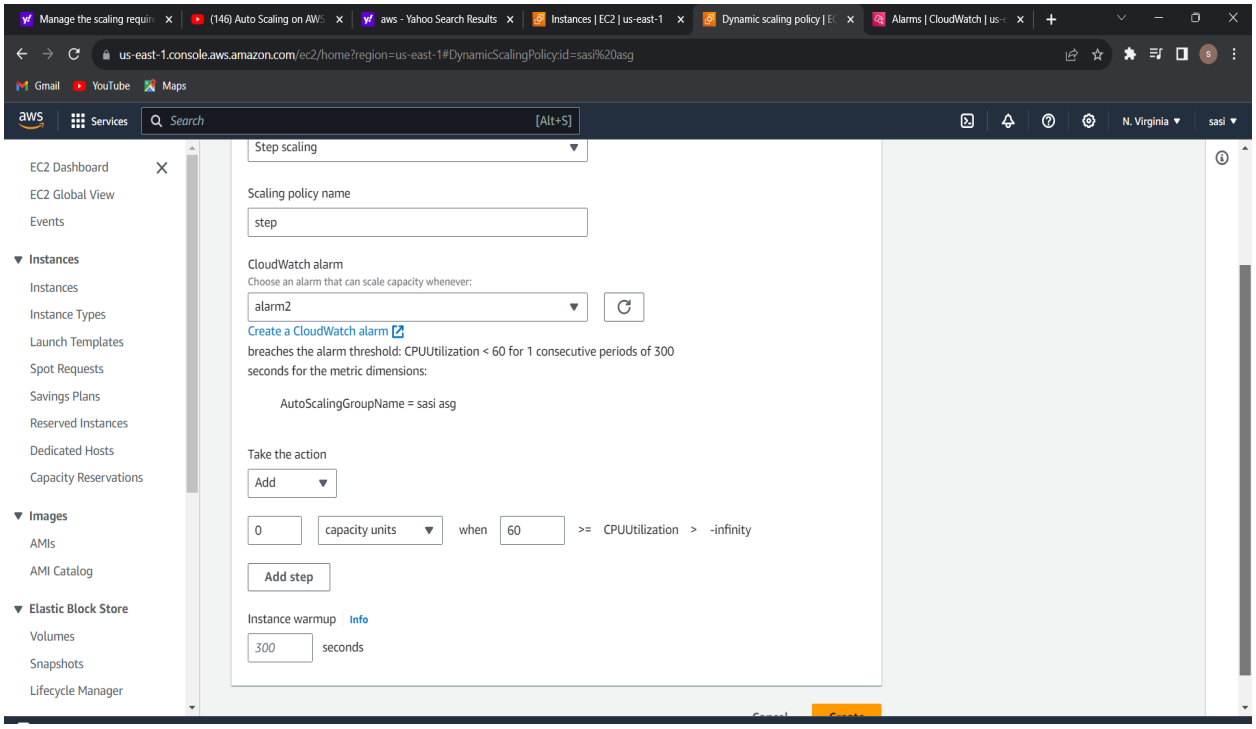
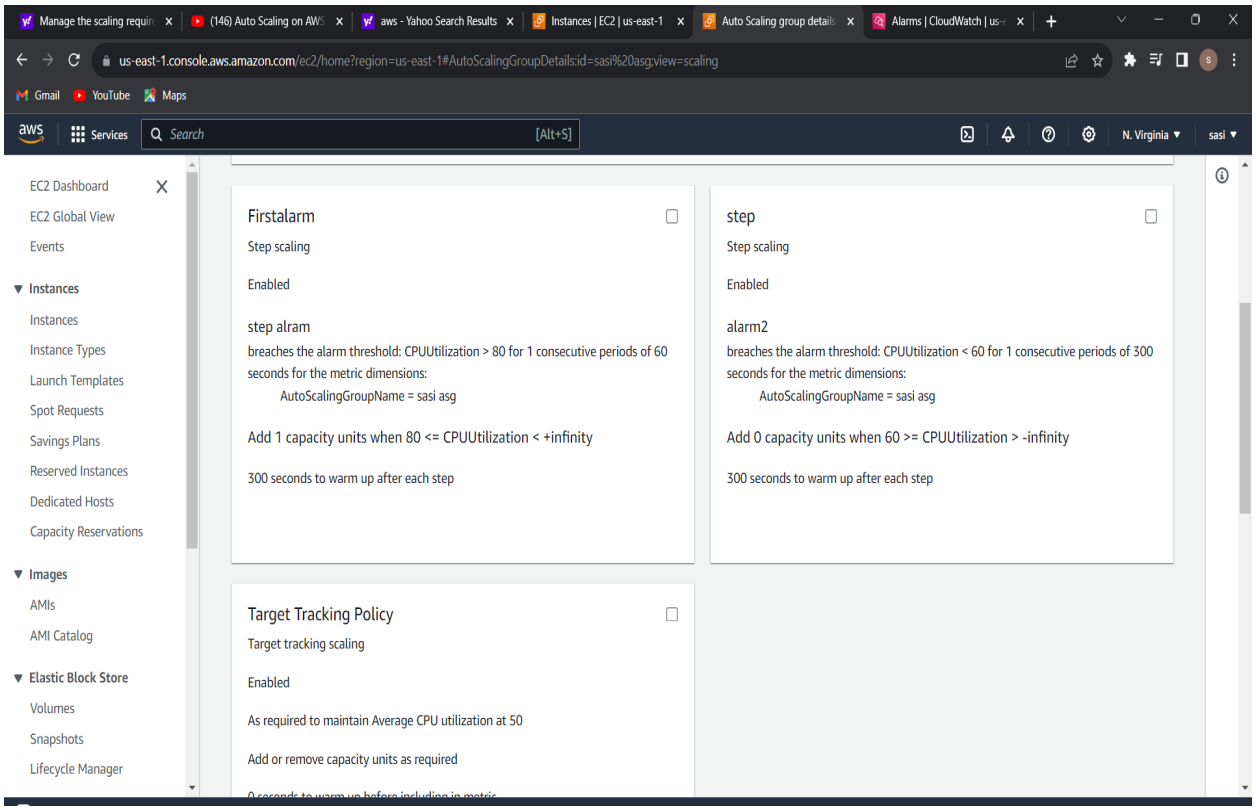
Privacy
Terms
Cookie preferences

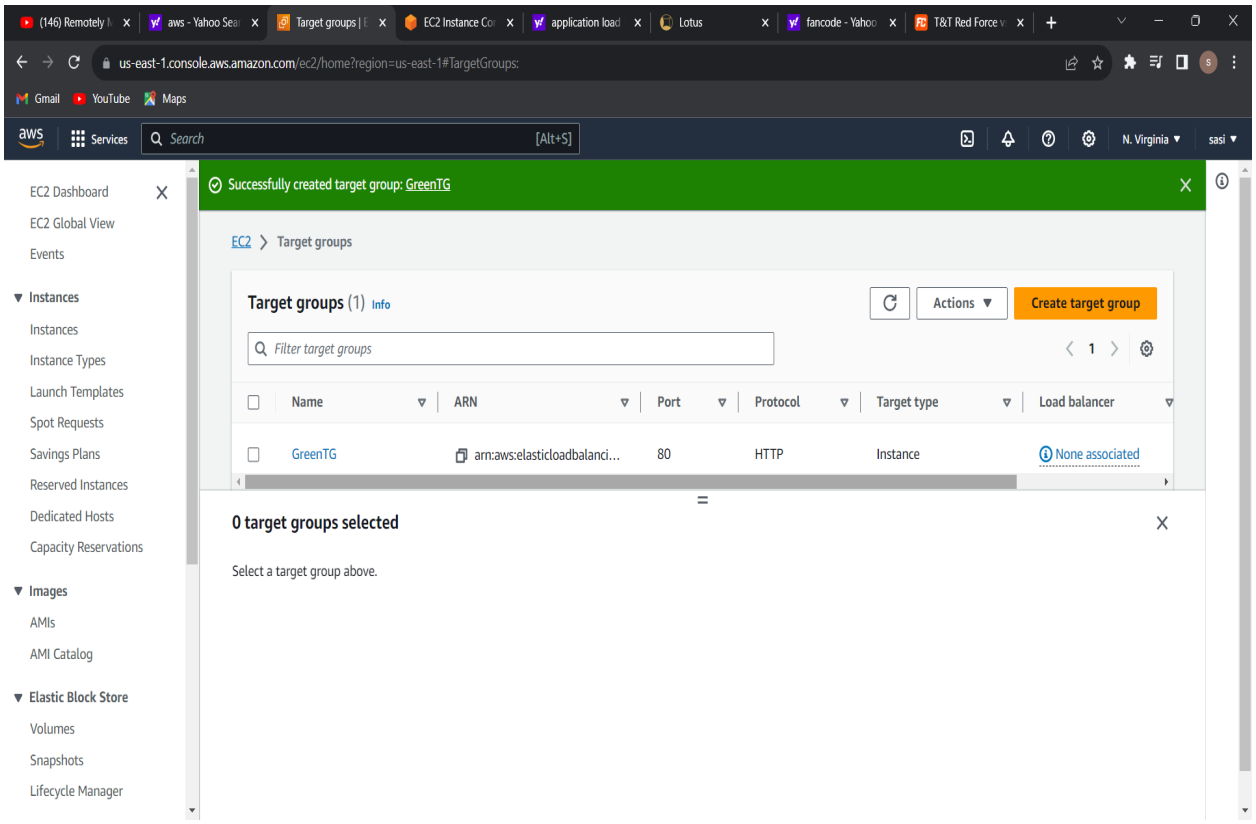

Period
5 minutes
Conditions
Threshold type
Static
Use a value as a threshold
Anomaly detection
Use a band as a threshold
Whenever CPUUtilization is...
Define the alarm condition.
Greater
> threshold
Greater/Equal
>= threshold
Lower/Equal
<= threshold
Lower
< threshold
than...
Define the threshold value.
60
Must be a number
Additional configuration
CloudShell
Feedback
© 2023, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

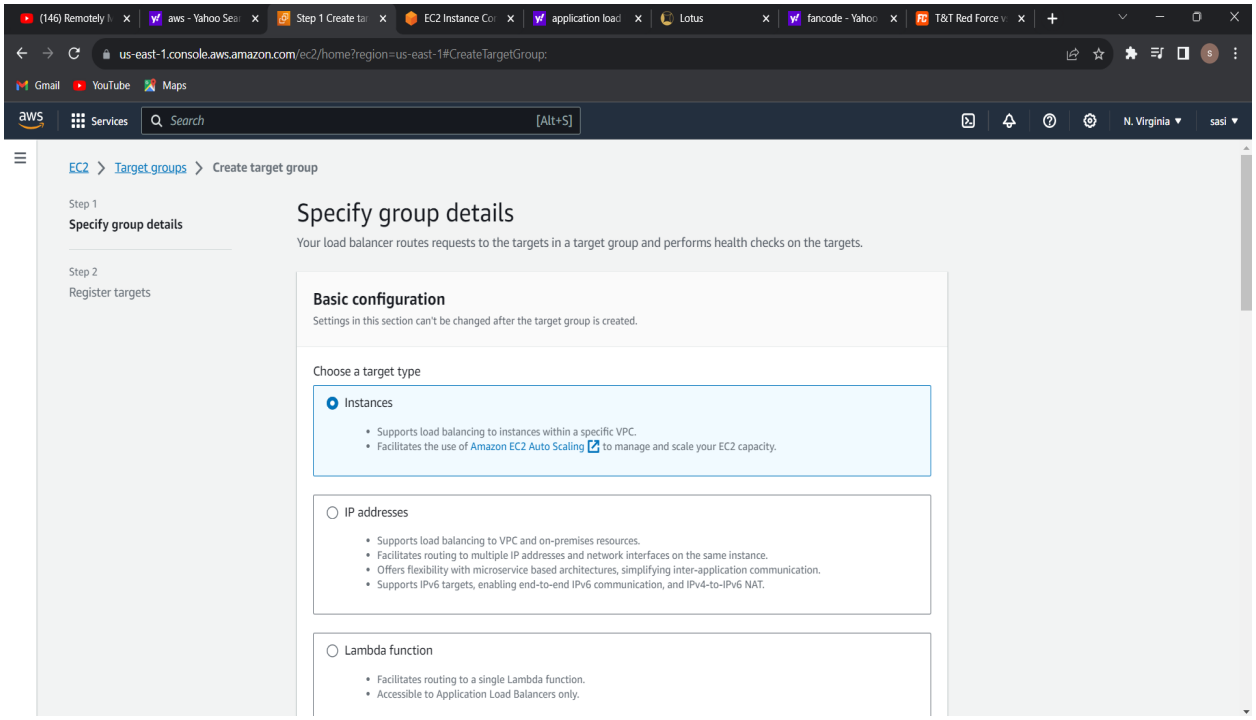

Manage the scaling requir
(146) Auto Scaling on AW
aws - Yahoo Search Results
Instances | EC2 | us-east-1
Dynamic scaling policy | E
Alarms | CloudWatch | us-
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#DynamicScalingPolicy:id=sasi%20asg
Gmail
YouTube
Maps
aws
Services
Search
[Alt+S]
N. Virginia
sasi
EC2 Dashboard
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
Lifecycle Manager
Step scaling
Scaling policy name
step
CloudWatch alarm
Choose an alarm that can scale capacity whenever:
alarm2
Create a CloudWatch alarm
breaches the alarm threshold: CPUUtilization < 60 for 1 consecutive periods of 300 seconds for the metric dimensions:
AutoScalingGroupName = sasi asg
Take the action
Add
0
capacity units
when
60
>= CPUUtilization > -infinity
Add step
Instance warmup
Info
300
seconds

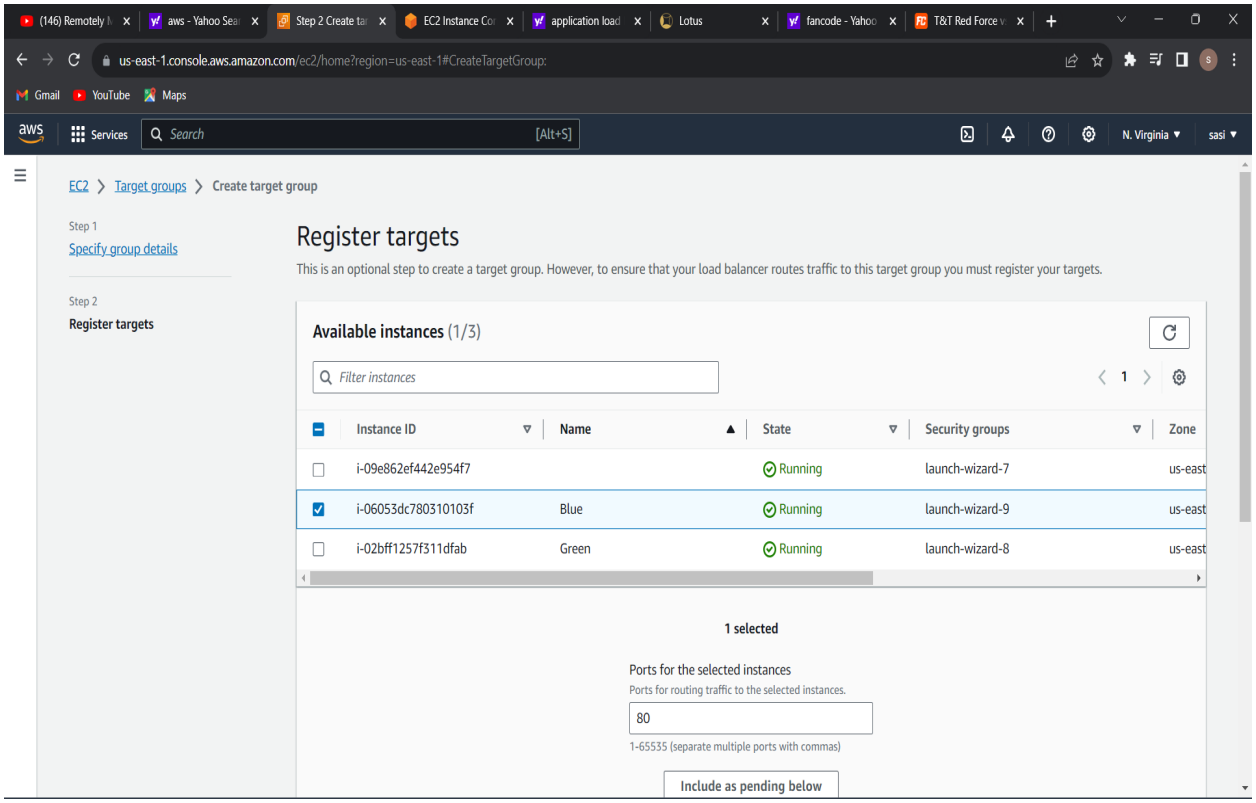

Manage the scaling requir
(146) Auto Scaling on AW
aws - Yahoo Search Results
Instances | EC2 | us-east-1
Auto Scaling group details
Alarms | CloudWatch | us-
us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#AutoScalingGroupDetails:id=sasi%20asg;view=scaling
Gmail
YouTube
Maps
aws
Services
Search
[Alt+S]
N. Virginia
sasi
EC2 Dashboard
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
Lifecycle Manager
Firstalarm
Step scaling
Enabled
step alram
breaches the alarm threshold: CPUUtilization > 80 for 1 consecutive periods of 60 seconds for the metric dimensions:
AutoScalingGroupName = sasi asg
Add 1 capacity units when 80 <= CPUUtilization < +infinity
300 seconds to warm up after each step
step
Step scaling
Enabled
alarm2
breaches the alarm threshold: CPUUtilization < 60 for 1 consecutive periods of 300 seconds for the metric dimensions:
AutoScalingGroupName = sasi asg
Add 0 capacity units when 60 >= CPUUtilization > -infinity
300 seconds to warm up after each step
Target Tracking Policy
Target tracking scaling
Enabled
As required to maintain Average CPU utilization at 50
Add or remove capacity units as required

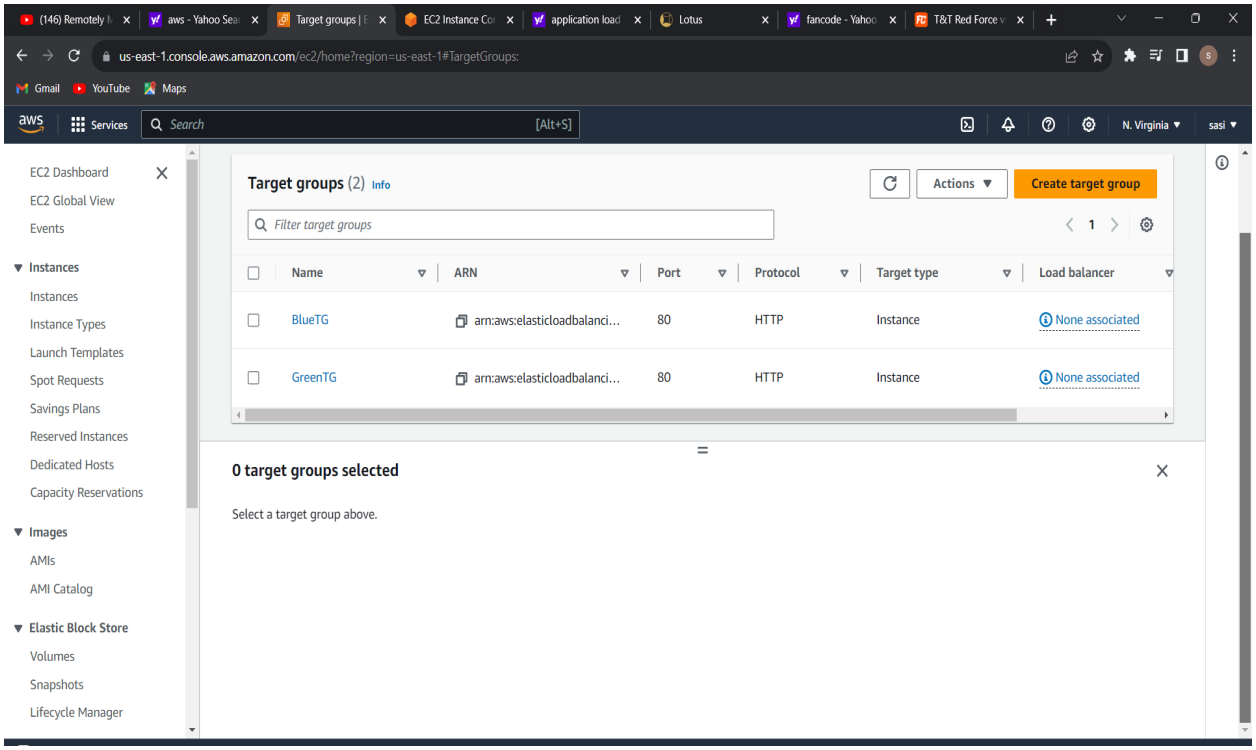
2) Create an Application Load balancer to distribute the load between compute resources
In your two target groups, make one for Blue deployment and the other for Green
Use weighted routing to route 70% of the traffic to the Blue target group and 30% of the traffic to the Green target group

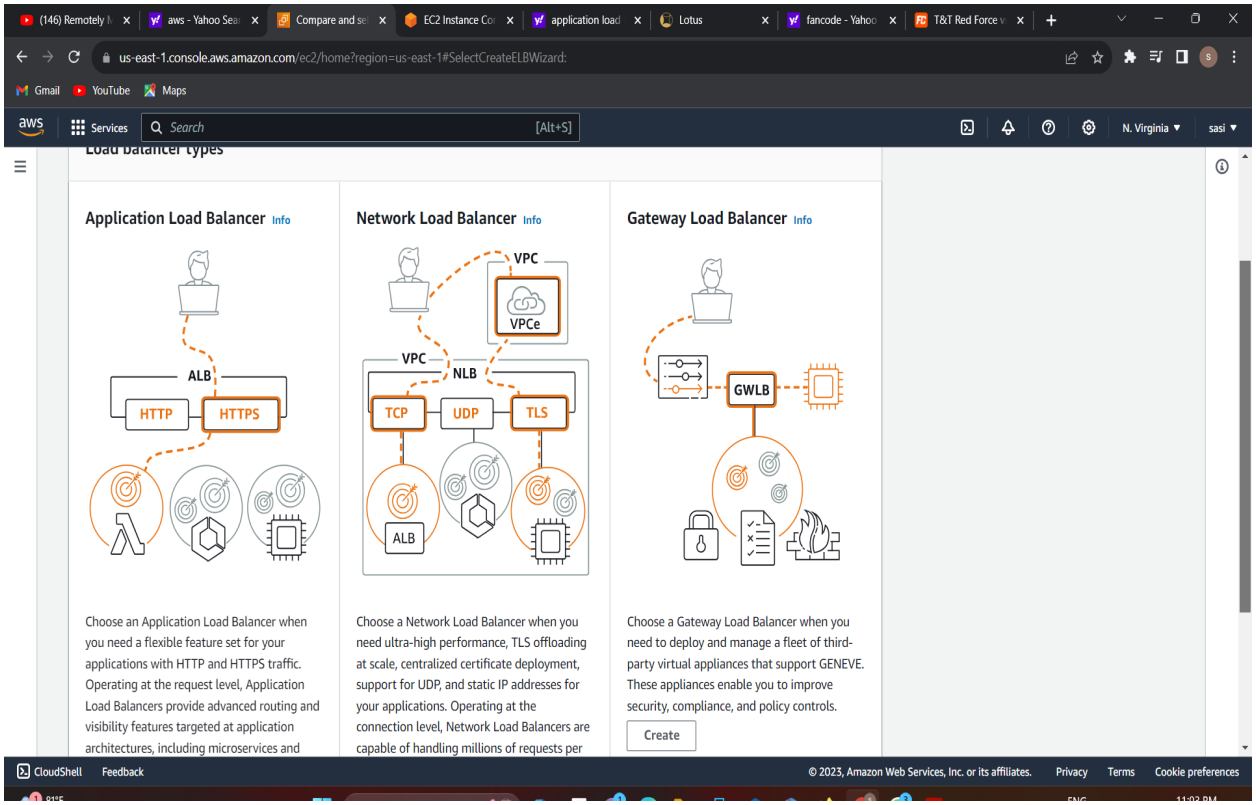
Create Target Groups and first create one instance

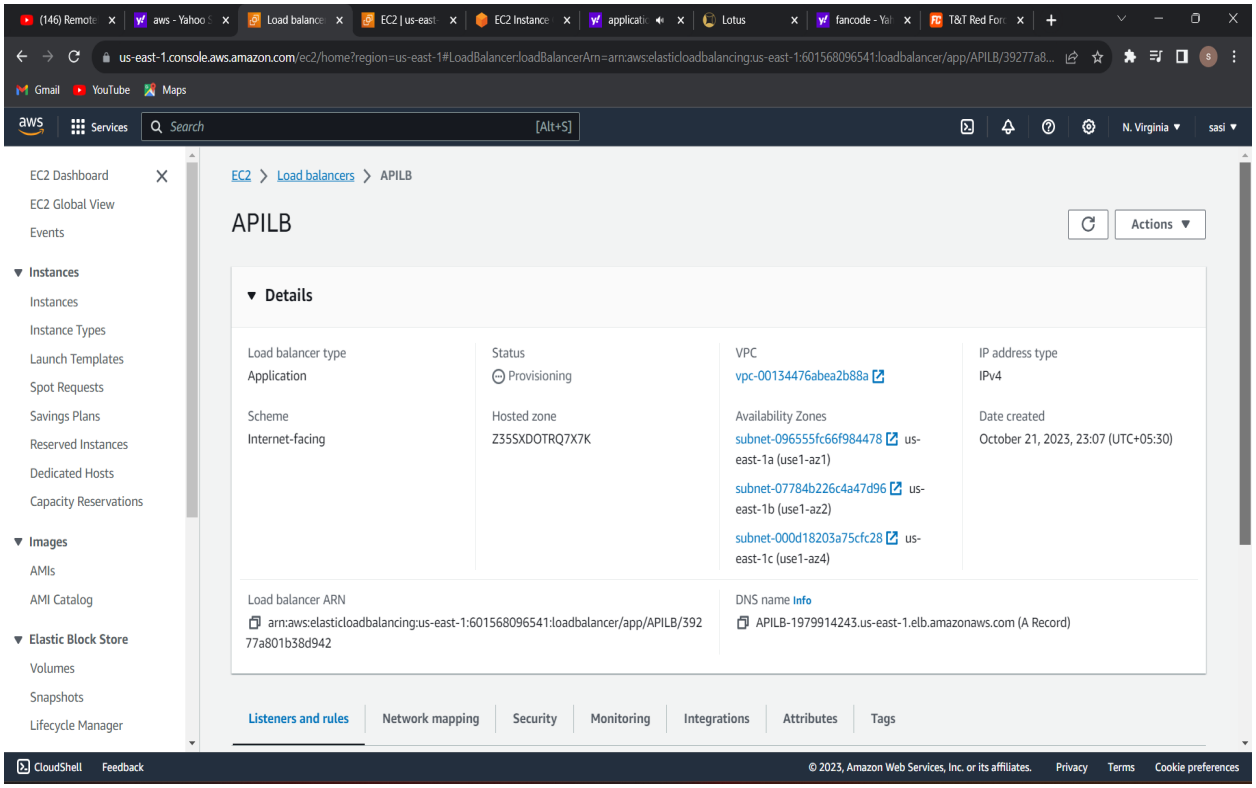


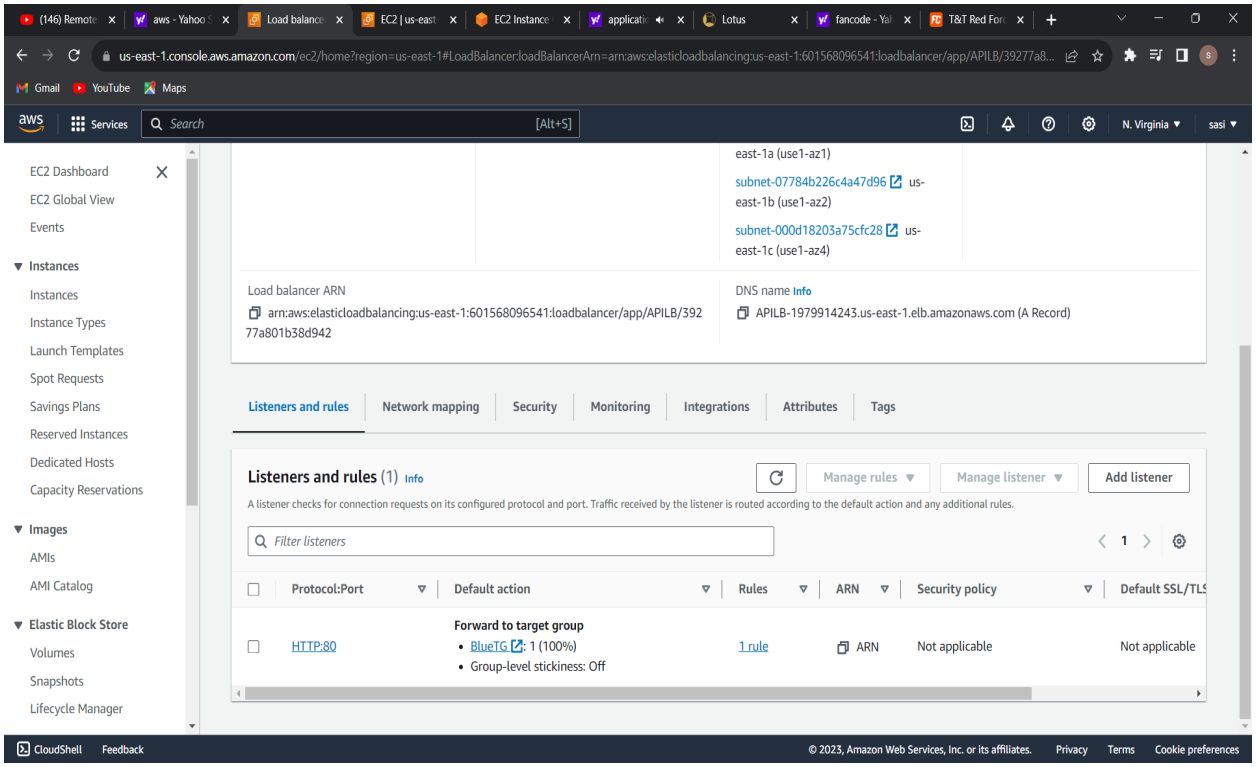

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:
Gmail
YouTube
Maps
Services
Search
[Alt+S]
N. Virginia
sasi
EC2 > Target groups > Create target group
Step 1
Specify group details
Step 2
Register targets
Specify group details
Your load balancer routes requests to the targets in a target group and performs health checks on the targets.
Basic configuration
Settings in this section can't be changed after the target group is created.
Choose a target type
Instances
Supports load balancing to instances within a specific VPC.
Facilitates the use of Amazon EC2 Auto Scaling to manage and scale your EC2 capacity.
IP addresses
Supports load balancing to VPC and on-premises resources.
Facilitates routing to multiple IP addresses and network interfaces on the same instance.
Offers flexibility with microservice based architectures, simplifying inter-application communication.
Supports IPv6 targets, enabling end-to-end IPv6 communication, and IPv4-to-IPv6 NAT.
Lambda function
Facilitates routing to a single Lambda function.
Accessible to Application Load Balancers only.


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateTargetGroup:
Gmail
YouTube
Maps
Services
Search
[Alt+S]
N. Virginia
sasi
EC2 > Target groups > Create target group
Step 1
Specify group details
Step 2
Register targets
Register targets
This is an optional step to create a target group. However, to ensure that your load balancer routes traffic to this target group you must register your targets.
Available instances (1/3)
Filter instances
Instance ID
Name
State
Security groups
Zone
i-09e862ef442e954f7
Running
launch-wizard-7
us-east
i-06053dc780310103f
Blue
Running
launch-wizard-9
us-east
i-02bff1257f311dfab
Green
Running
launch-wizard-8
us-east
1 selected
Ports for the selected instances
Ports for routing traffic to the selected instances.
80
1-65535 (separate multiple ports with commas)
Include as pending below

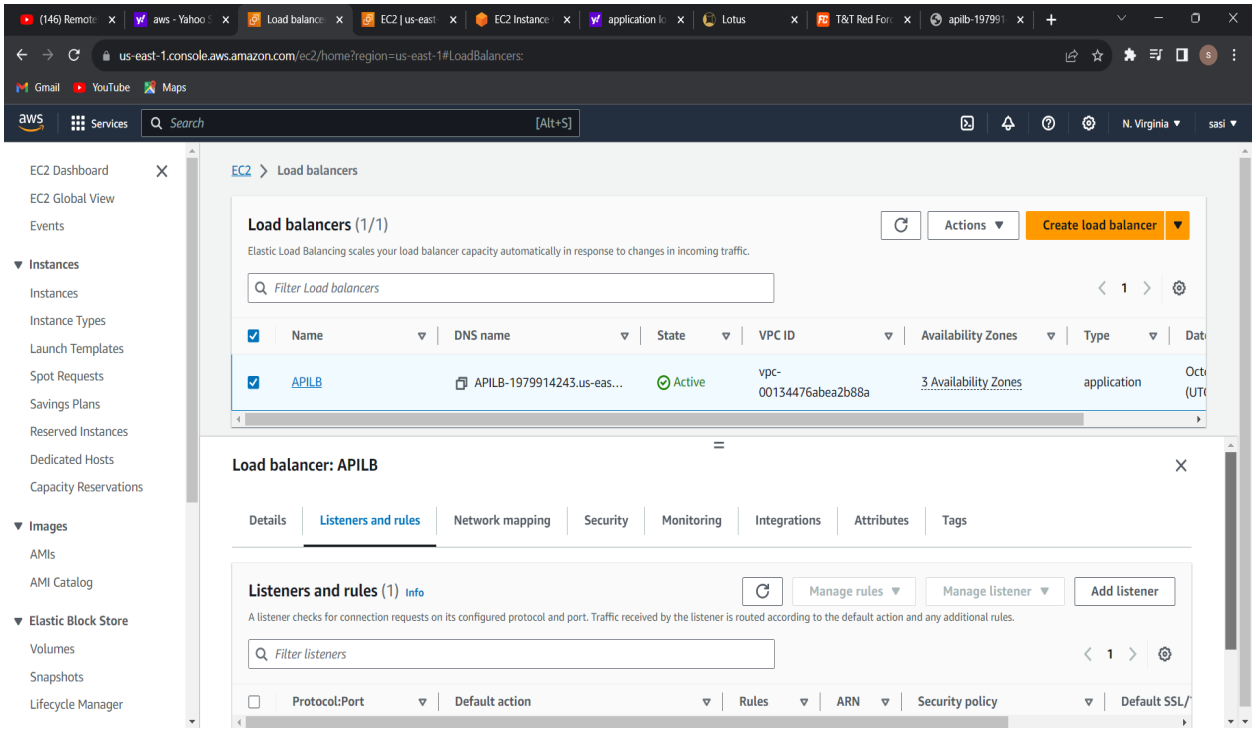

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#TargetGroups:
Gmail
YouTube
Maps
Services
Search
[Alt+S]
N. Virginia
sasi
EC2 Dashboard
EC2 Global View
Events
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Target groups (2) Info
Actions
Create target group
Filter target groups
Name
ARN
Port
Protocol
Target type
Load balancer
BlueTG
arn:aws:elasticloadbalanci...
80
HTTP
Instance
None associated
GreenTG
arn:aws:elasticloadbalanci...
80
HTTP
Instance
None associated
0 target groups selected
Select a target group above.

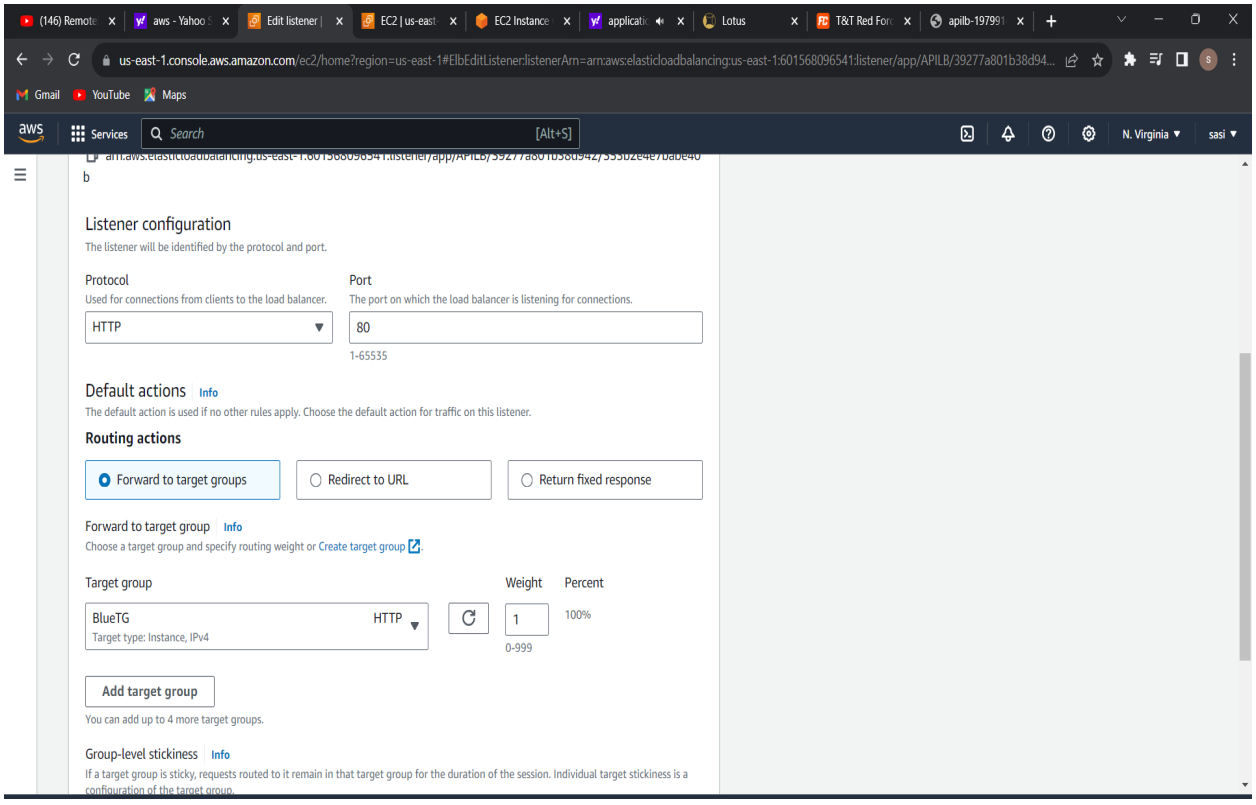

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#SelectCreateELBWizard:
Gmail
YouTube
Maps
Services
Search
[Alt+S]
N. Virginia
sasi
Application Load Balancer Info
ALB
HTTP
HTTPS
Choose an Application Load Balancer when you need a flexible feature set for your applications with HTTP and HTTPS traffic. Operating at the request level, Application Load Balancers provide advanced routing and visibility features targeted at application architectures, including microservices and
Network Load Balancer Info
VPC
VPCe
VPC
NLB
TCP
UDP
TLS
ALB
Choose a Network Load Balancer when you need ultra-high performance, TLS offloading at scale, centralized certificate deployment, support for UDP, and static IP addresses for your applications. Operating at the connection level, Network Load Balancers are capable of handling millions of requests per
Gateway Load Balancer Info
GWLB
Choose a Gateway Load Balancer when you need to deploy and manage a fleet of third-party virtual appliances that support GENEVE. These appliances enable you to improve security, compliance, and policy controls.
Create
CloudShell
Feedback
© 2023, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

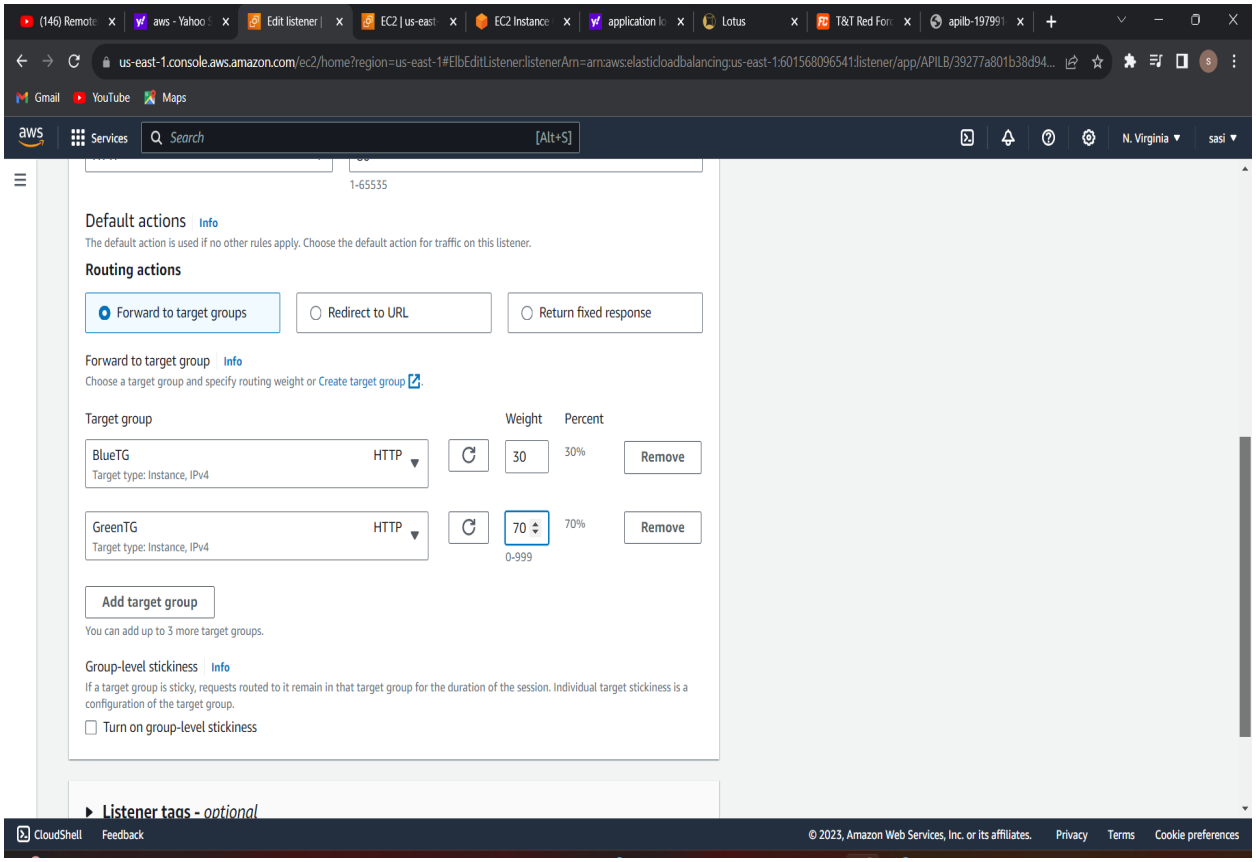




First you have to add one target group after attaching to the instances then edit listen there you can add another target group whatever you want.


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LoadBalancers:
Services
Search
[Alt+S]
N. Virginia
sasi
EC2 Dashboard
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
Lifecycle Manager
EC2 > Load balancers
Load balancers (1/1)
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
APILB
APILB-1979914243.us-eas...
Active
vpc-00134476abea2b88a
3 Availability Zones
application
Load balancer: APILB
Details
Listeners and rules
Network mapping
Security
Monitoring
Integrations
Attributes
Tags
Listeners and rules (1) Info
A listener checks for connection requests on its configured protocol and port. Traffic received by the listener is routed according to the default action and any additional rules.
Manage rules
Manage listener
Add listener
Filter listeners
Protocol:Port
Default action
Rules
ARN
Security policy


us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ElbEditListener:listenerArn=arn:aws:elasticloadbalancing:us-east-1:601568096541:listener/app/APILB/39277a801b38d94...
Services
Search
[Alt+S]
N. Virginia
sasi
Listener configuration
The listener will be identified by the protocol and port.
Protocol
Used for connections from clients to the load balancer.
HTTP
Port
The port on which the load balancer is listening for connections.
80
1-65535
Default actions Info
The default action is used if no other rules apply. Choose the default action for traffic on this listener.
Routing actions
Forward to target groups
Redirect to URL
Return fixed response
Forward to target group Info
Choose a target group and specify routing weight or Create target group.
Target group
Weight
Percent
BlueTG
HTTP
Target type: Instance, IPv4
1
0-999
100%
Add target group
You can add up to 4 more target groups.
Group-level stickiness Info
If a target group is sticky, requests routed to it remain in that target group for the duration of the session. Individual target stickiness is a



Here you can find the results . If you want you can edit routing actions and percentages also.