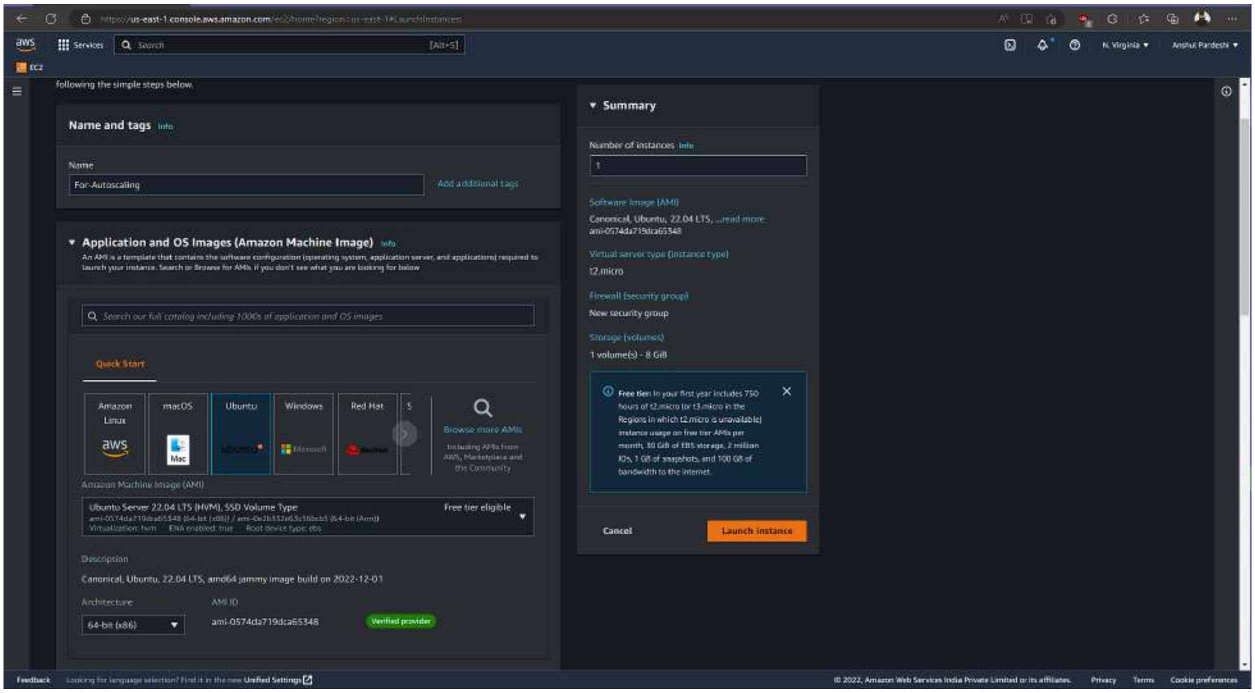
Module-2: Auto Scaling Assignment - 2

You have been asked to:
1. Create a Web Server AMI with Apache 2 server running in it
2. Create a Launch Configuration with this AMI
3. Use this Launch Configuration to create an Auto Scaling group with 1 minimum and 3 maximum instances.

Create an EC2 instance allowing all traffic of http,ssh and https.



https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LaunchInstances

following the simple steps below.

Name and tags

Name: For-Autoscaling

Application and OS Images (Amazon Machine Image)

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

Quick Start: Amazon Linux | macOS | Ubuntu | Windows | Red Hat

Amazon Machine Image (AMI): Ubuntu Server 22.04 LTS (HVM), SSD Volume Type — Free tier eligible
ami-0574da719dca65348 (64-bit (x86)) / ami-0e2b332e63c56bcb5 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

Description: Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2022-12-01

Architecture: 64-bit (x86)
AMI ID: ami-0574da719dca65348 Verified provider

Summary

Number of instances: 1

Software Image (AMI): Canonical, Ubuntu, 22.04 LTS, ...read more
ami-0574da719dca65348

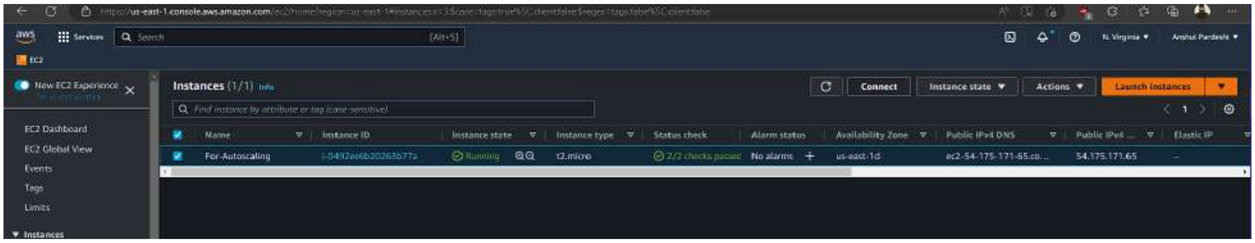
Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Select the instance created and connect to it.



https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:v=3;$case=tags:true%5C,client:false;$regex=tags:false%5C,client:false

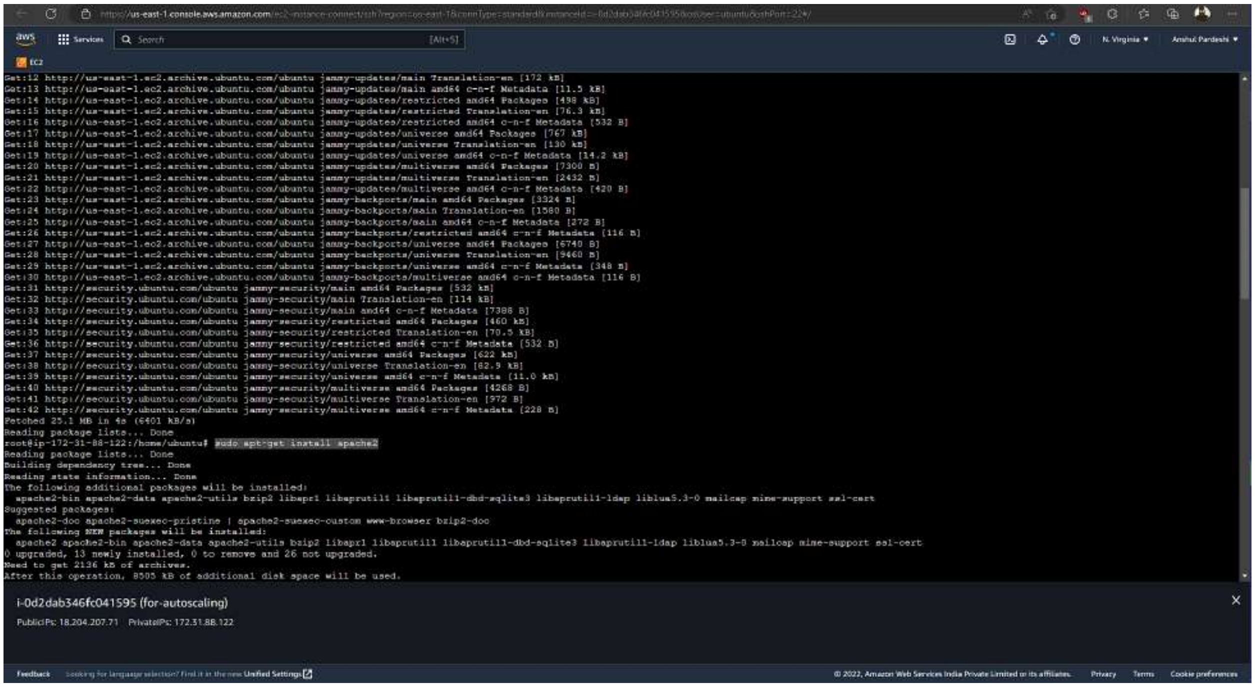
Instances (1/1)

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
☑	For-Autoscaling	i-0492ee6b20263b77a	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-54-175-171-65.co...	54.175.171.65	–

Connect to that instance and use following commands:

Sudo su
Sudo apt-get update
Sudo apt-get install apache2 -y
cd /var/www/html
rm index.html
nano index ,html and write the Text that you want to be displayed on webserver.

This will update your instance and then install Apache2 server.



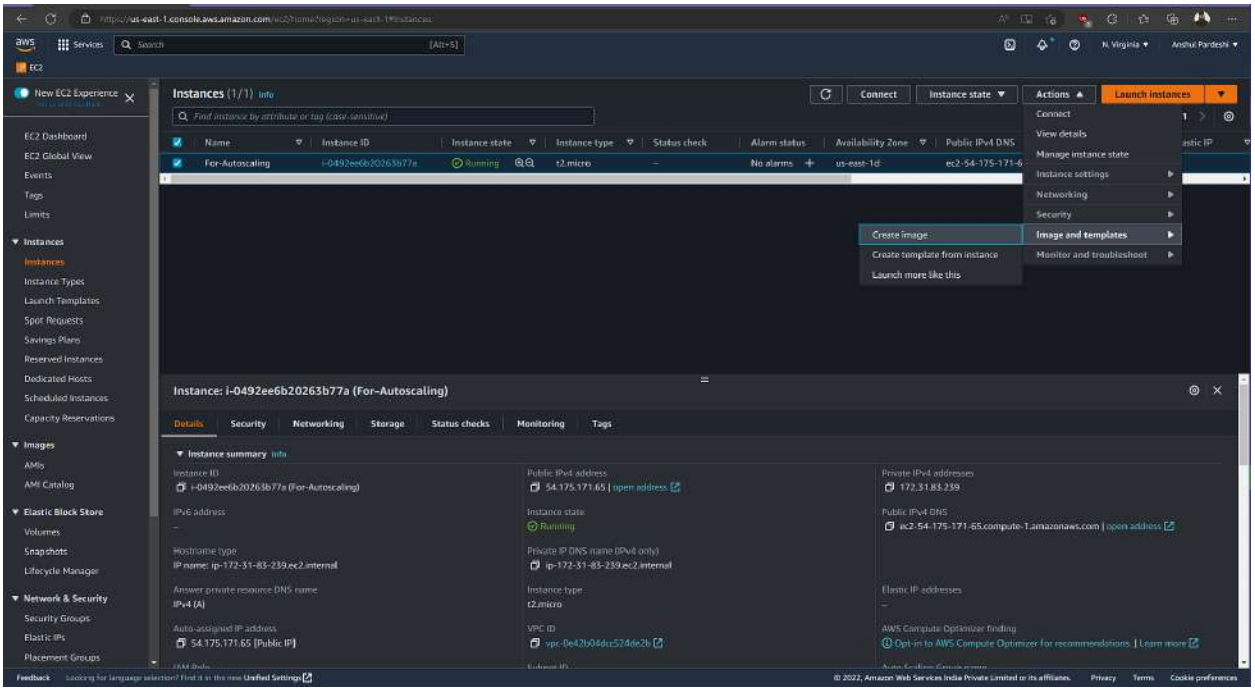
```
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [172 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [11.5 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [498 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [76.3 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [532 B]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [767 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [130 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [14.2 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [7300 B]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [2432 B]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [420 B]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [3324 B]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [1580 B]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [272 B]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [6740 B]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [9460 B]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [348 B]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [532 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [114 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [7388 B]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [460 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [70.5 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [532 B]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [622 kB]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [82.9 kB]
Get:39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [11.0 kB]
Get:40 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [4268 B]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [972 B]
Get:42 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [228 B]
Fetched 25.1 MB in 4s (6401 kB/s)
Reading package lists... Done
root@ip-172-31-88-122:/home/ubuntu# sudo apt-get install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.3-0 mailcap mime-support ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser bzip2-doc
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.3-0 mailcap mime-support ssl-cert
0 upgraded, 13 newly installed, 0 to remove and 26 not upgraded.
Need to get 2136 kB of archives.
After this operation, 8505 kB of additional disk space will be used.
```

i-0d2dab346fc041595 (for-autoscaling)

PublicIPs: 18.204.207.71 PrivateIPs: 172.31.88.122

https://us-east-1.console.aws.amazon.com
Services
Search
[Alt+S]
EC2
N. Virginia
Anshul Pardeshi
Feedback
Looking for language selection? Find it in the new Unified Settings
© 2022, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences

Select the instance then going on actions drop down menu create an image that will be used to create Launch Configuration.



Instances (1/1)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
For-Autoscaling	i-0492ee6b20263b77a	Running	t2.micro	–	No alarms	us-east-1d	ec2-54-175-171-6

Instance: i-0492ee6b20263b77a (For-Autoscaling)

Instance summary

Instance ID: i-0492ee6b20263b77a (For-Autoscaling)

Public IPv4 address: 54.175.171.65 | open address

Private IPv4 addresses: 172.31.83.239

IPv6 address: –

Instance state: Running

Public IPv4 DNS: ec2-54-175-171-65.compute-1.amazonaws.com | open address

Hostname type: IP name: ip-172-31-83-239.ec2.internal

Private IP DNS name (IPv4 only): ip-172-31-83-239.ec2.internal

Answer private resource DNS name: IPv4 (A)

Instance type: t2.micro

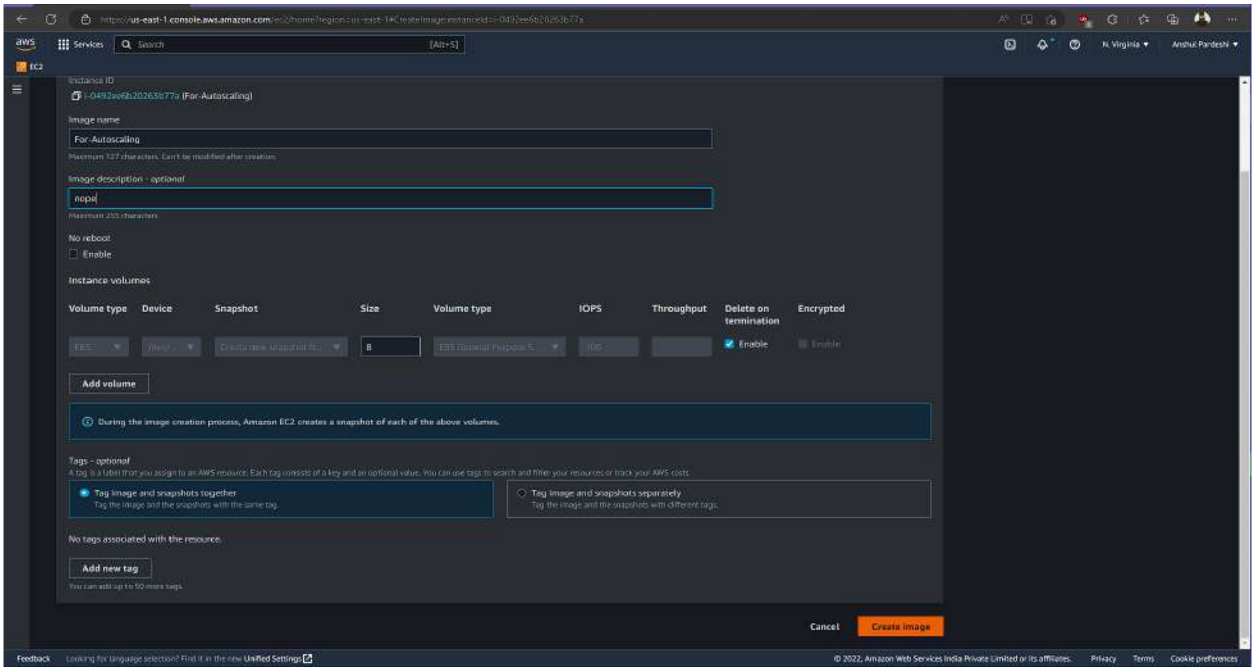
Elastic IP addresses: –

Auto-assigned IP address: 54.175.171.65 [Public IP]

VPC ID: vpc-0e42b04dcc524de2b

AWS Compute Optimizer finding: Opt-in to AWS Compute Optimizer for recommendations. | Learn more

Give image a name and let other settings to be default



Instance ID

i-0492ee6b20263b77a (For-Autoscaling)

Image name

For-Autoscaling

Maximum 127 characters. Can't be modified after creation.

Image description - *optional*

nope

Maximum 255 characters

No reboot

□ Enable

Instance volumes

Volume type	Device	Snapshot	Size	Volume type	IOPS	Throughput	Delete on termination	Encrypted
EBS	/dev/...	Create new snapshot fr...	8	EBS General Purpose S...	100		☑ Enable	□ Enable

During the image creation process, Amazon EC2 creates a snapshot of each of the above volumes.

Tags - *optional*

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

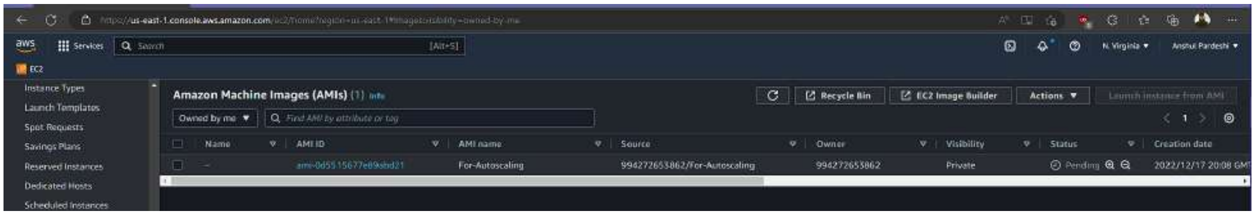
● Tag image and snapshots together
Tag the image and the snapshots with the same tag.

○ Tag image and snapshots separately
Tag the image and the snapshots with different tags.

No tags associated with the resource.

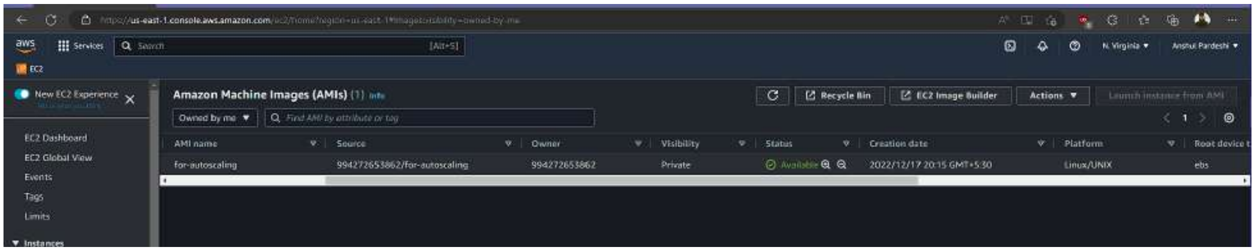
You can add up to 50 more tags.

Check if the image is created.



Amazon Machine Images (AMIs) (1)

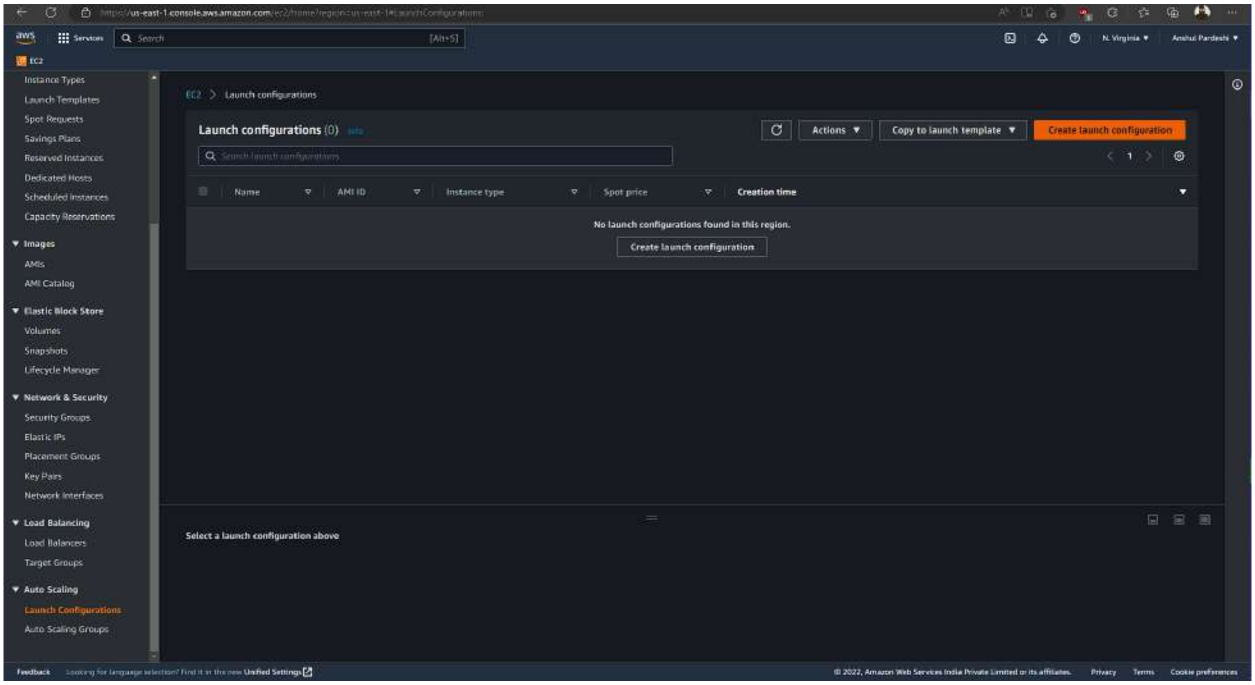
Name	AMI ID	AMI name	Source	Owner	Visibility	Status	Creation date
–	ami-0d5515677e89abd21	For-Autoscaling	994272653862/For-Autoscaling	994272653862	Private	Pending	2022/12/17 20:08 GMT



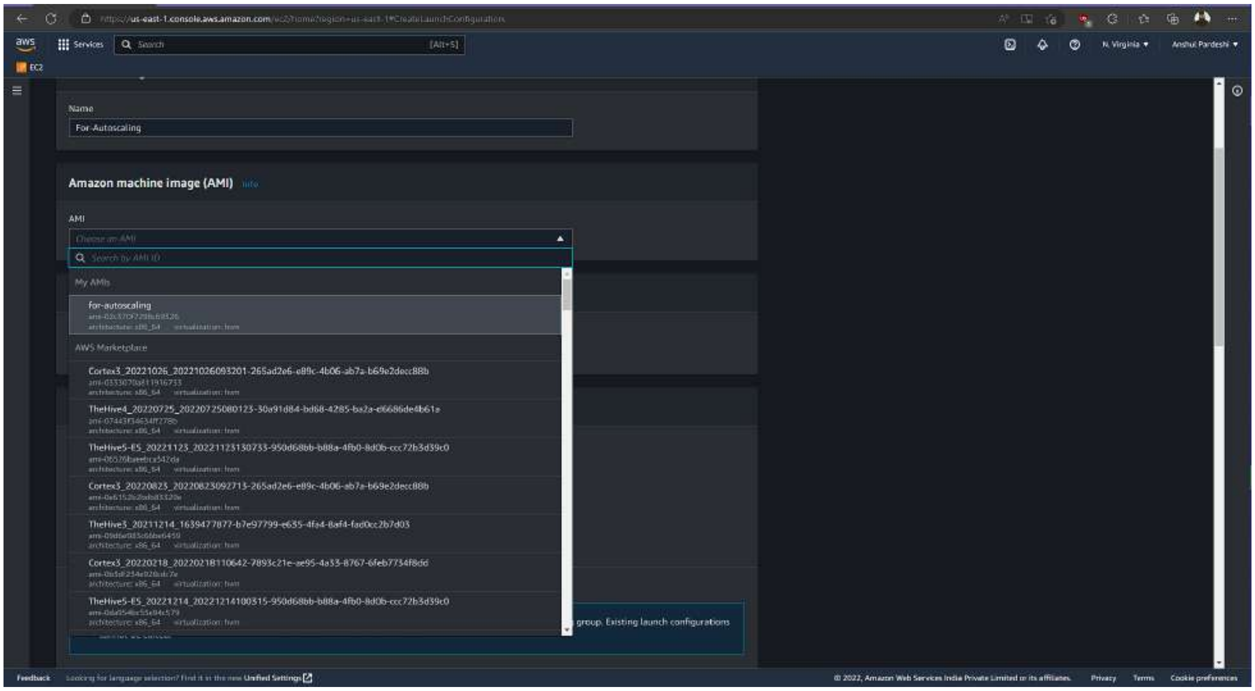
Amazon Machine Images (AMIs) (1)

AMI name	Source	Owner	Visibility	Status	Creation date	Platform	Root device t
for-autoscaling	994272653862/for-autoscaling	994272653862	Private	Available	2022/12/17 20:15 GMT+5:30	Linux/UNIX	ebs

Now let's create Launch Configuration.



Give a name to it and select the same AMI that we just created.



Name: For-Autoscaling

Amazon machine image (AMI)

AMI: Choose an AMI

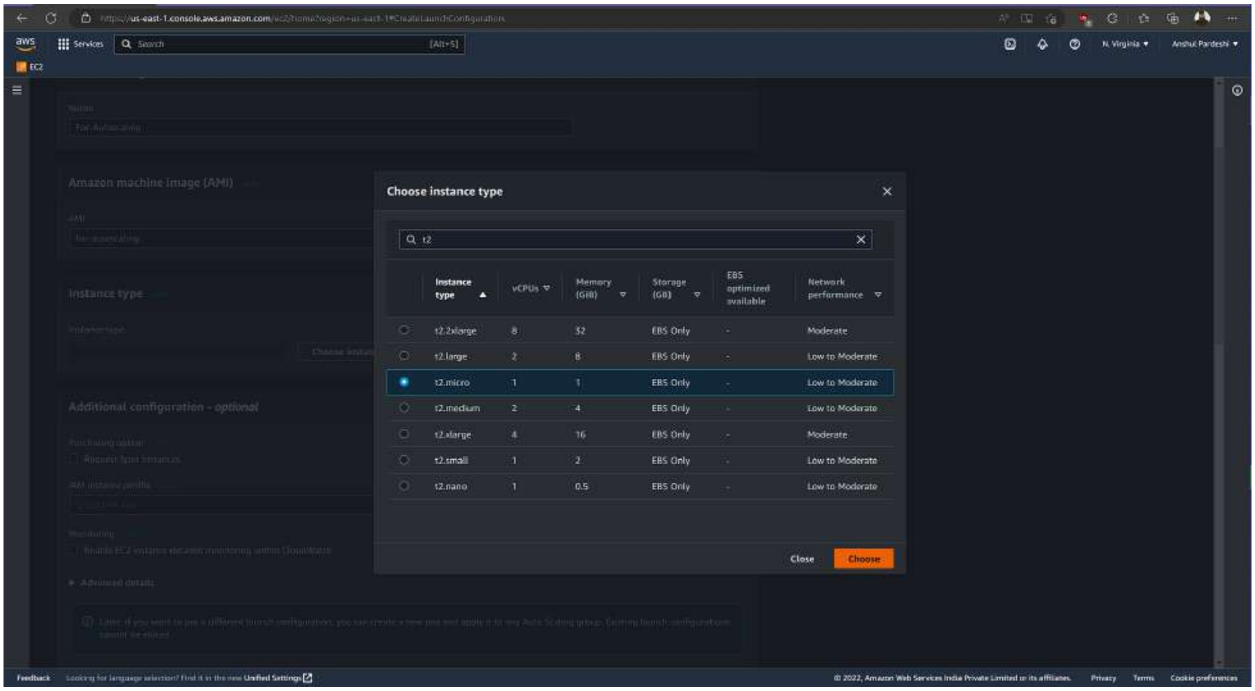
My AMIs

- for-autoscaling
  ami-02c370f729bb69326
  architecture: x86_64 virtualization: hvm

AWS Marketplace

- Cortex3_20221026_20221026093201-265ad2e6-e89c-4b06-ab7a-b69e2decc88b
  ami-0333070a811916733
  architecture: x86_64 virtualization: hvm
- TheHive4_20220725_20220725080123-30a91d84-bd68-4285-ba2a-e6686de4b61a
  ami-07443f34634ff278b
  architecture: x86_64 virtualization: hvm
- TheHive5-ES_20221123_20221123130733-950d68bb-b88a-4fb0-8d0b-ccc72b3d39c0
  ami-06578baeebca542da
  architecture: x86_64 virtualization: hvm
- Cortex3_20220823_20220823092713-265ad2e6-e89c-4b06-ab7a-b69e2decc88b
  ami-0a6152b2bdb83320e
  architecture: x86_64 virtualization: hvm
- TheHive3_20211214_1639477877-b7e97799-e635-4fa4-8af4-fad0cc2b7d03
  ami-09d6e085c66be6459
  architecture: x86_64 virtualization: hvm
- Cortex3_20220218_20220218110642-7893c21e-ae95-4a33-8767-6feb7734f8dd
  ami-0b5df234e026dc7e
  architecture: x86_64 virtualization: hvm
- TheHive5-ES_20221214_20221214100315-950d68bb-b88a-4fb0-8d0b-ccc72b3d39c0
  ami-0da054bc55e94c579
  architecture: x86_64 virtualization: hvm

Select t2.micro instance for this case

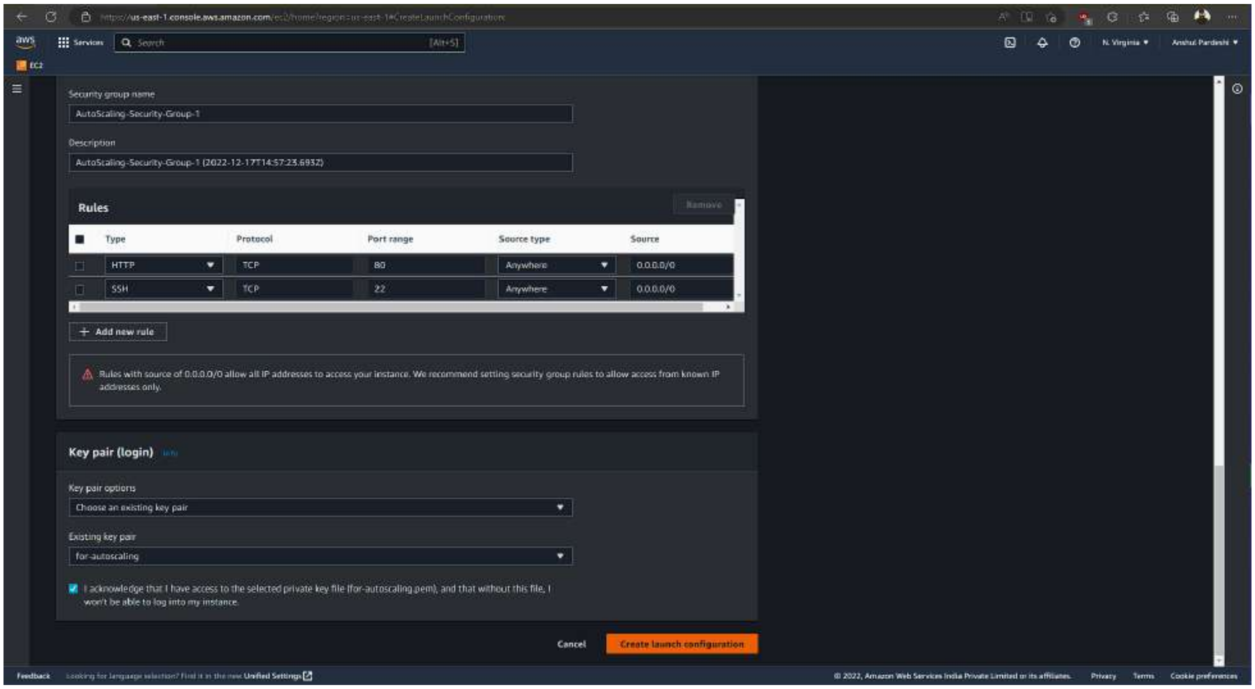


Choose instance type

t2

	Instance type	vCPUs	Memory (GiB)	Storage (GB)	EBS optimized available	Network performance
○	t2.2xlarge	8	32	EBS Only	-	Moderate
○	t2.large	2	8	EBS Only	-	Low to Moderate
●	t2.micro	1	1	EBS Only	-	Low to Moderate
○	t2.medium	2	4	EBS Only	-	Low to Moderate
○	t2.xlarge	4	16	EBS Only	-	Moderate
○	t2.small	1	2	EBS Only	-	Low to Moderate
○	t2.nano	1	0.5	EBS Only	-	Low to Moderate

Allow ssh and http traffic and create Launch Configuration.



Security group name: AutoScaling-Security-Group-1

Description: AutoScaling-Security-Group-1 (2022-12-17T14:57:23.693Z)

Rules

	Type	Protocol	Port range	Source type	Source
□	HTTP	TCP	80	Anywhere	0.0.0.0/0
□	SSH	TCP	22	Anywhere	0.0.0.0/0

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

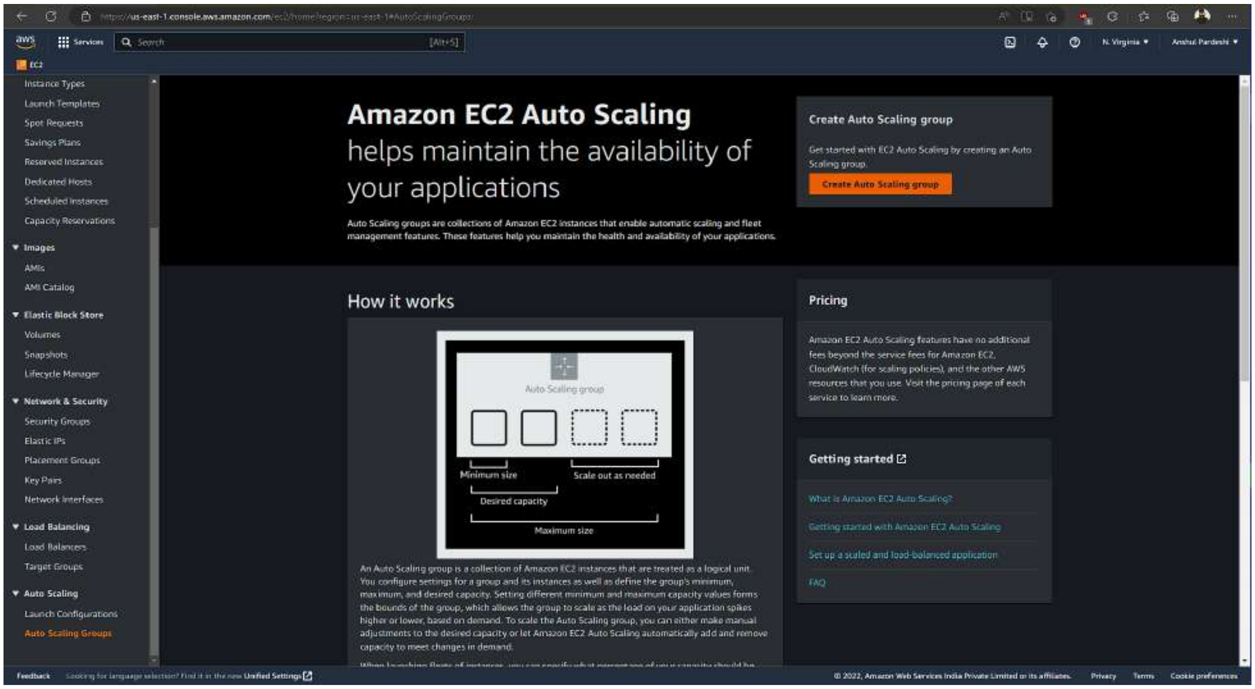
Key pair (login)

Key pair options: Choose an existing key pair

Existing key pair: for-autoscaling

☑ I acknowledge that I have access to the selected private key file (for-autoscaling.pem), and that without this file, I won't be able to log into my instance.

Now let's create Autoscaling group.



Amazon EC2 Auto Scaling
helps maintain the availability of your applications

Auto Scaling groups are collections of Amazon EC2 instances that enable automatic scaling and fleet management features. These features help you maintain the health and availability of your applications.

Create Auto Scaling group

Get started with EC2 Auto Scaling by creating an Auto Scaling group.

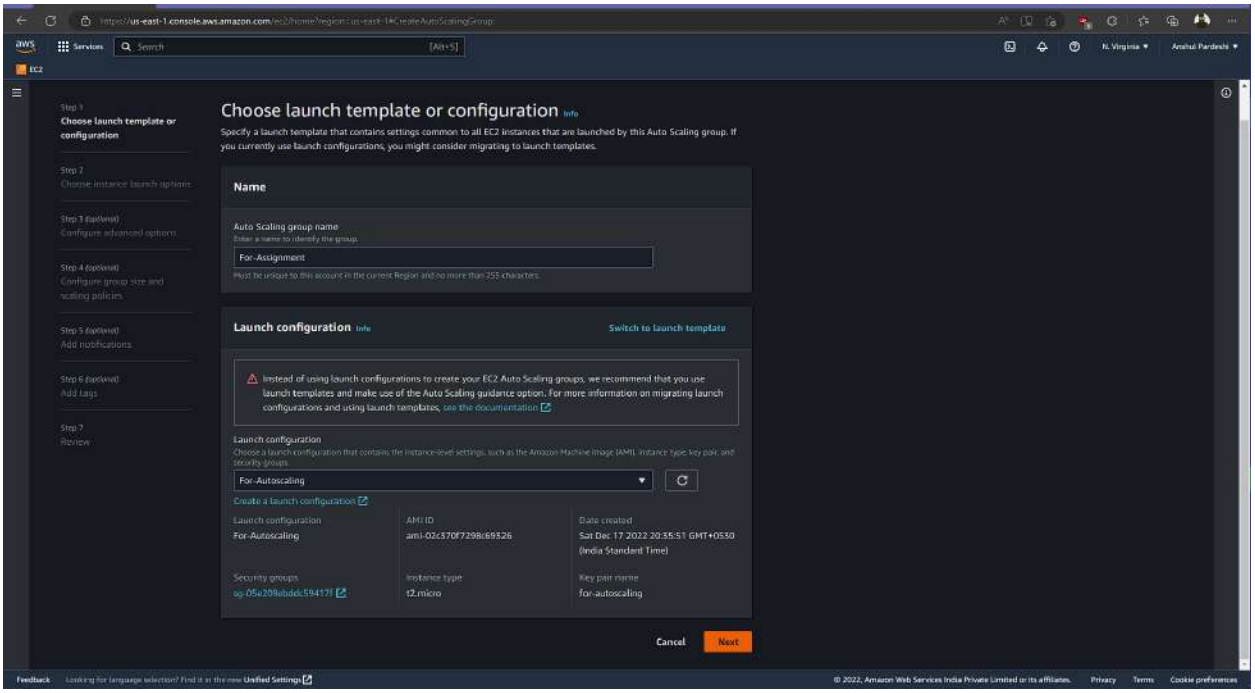
How it works

An Auto Scaling group is a collection of Amazon EC2 instances that are treated as a logical unit. You configure settings for a group and its instances as well as define the group's minimum, maximum, and desired capacity. Setting different minimum and maximum capacity values forms the bounds of the group, which allows the group to scale as the load on your application spikes higher or lower, based on demand. To scale the Auto Scaling group, you can either make manual adjustments to the desired capacity or let Amazon EC2 Auto Scaling automatically add and remove capacity to meet changes in demand.

Pricing

Amazon EC2 Auto Scaling features have no additional fees beyond the service fees for Amazon EC2, CloudWatch (for scaling policies), and the other AWS resources that you use. Visit the pricing page of each service to learn more.

Give a name to it and select the Launch Configuration that we just created.


https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateAutoScalingGroup:
aws
Services
Search
[Alt+S]
N. Virginia ▾
Anshul Pardeshi ▾
EC2
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
Info
Switch to launch template
Create a launch configuration
Cancel
Next
Feedback
Looking for language selection? Find it in the new Unified Settings
© 2022, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences

Choose launch template or configuration

Specify a launch template that contains settings common to all EC2 instances that are launched by this Auto Scaling group. If you currently use launch configurations, you might consider migrating to launch templates.

Name

Auto Scaling group name
Enter a name to identify the group.
For-Assignment
Must be unique to this account in the current Region and no more than 255 characters.

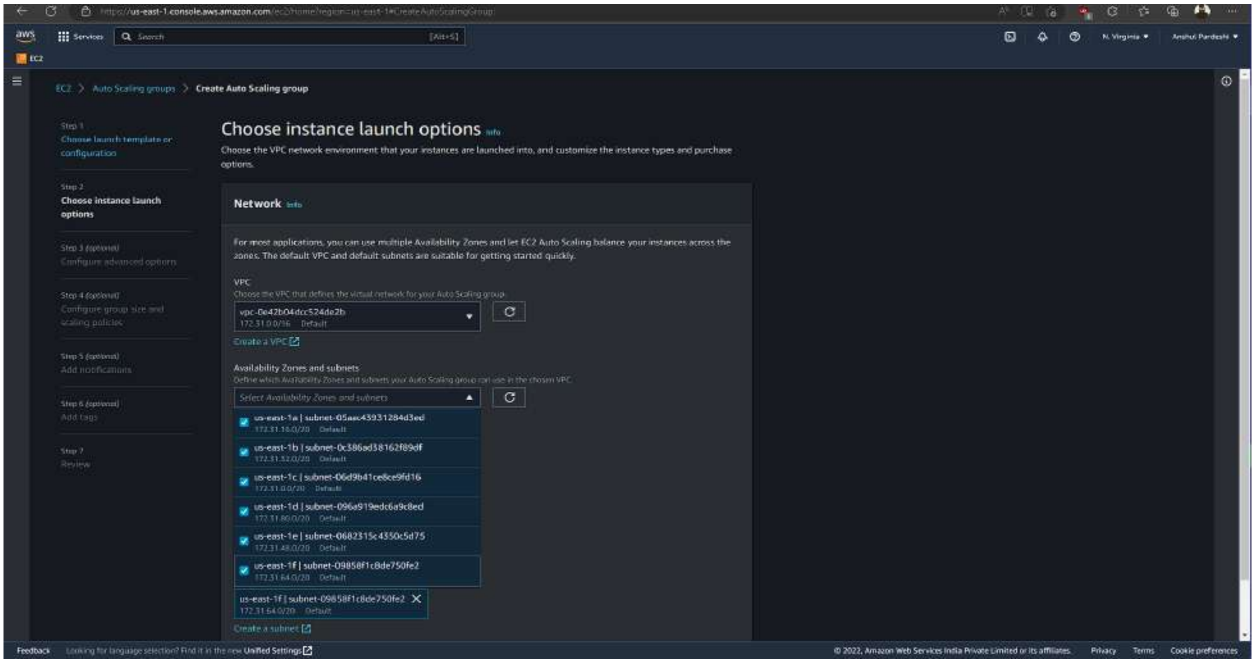
Launch configuration

⚠ Instead of using launch configurations to create your EC2 Auto Scaling groups, we recommend that you use launch templates and make use of the Auto Scaling guidance option. For more information on migrating launch configurations and using launch templates, see the documentation

Launch configuration
Choose a launch configuration that contains the instance-level settings, such as the Amazon Machine Image (AMI), instance type, key pair, and security groups.
For-Autoscaling ▾

Launch configuration	AMI ID	Date created
For-Autoscaling	ami-02c370f7298c69326	Sat Dec 17 2022 20:35:51 GMT+0530 (India Standard Time)
Security groups	**Instance type**	**Key pair name**
sg-05a209abddc59417f	t2.micro	for-autoscaling

Let the VPC be default and then select all AZ's.



EC2 > Auto Scaling groups > Create Auto Scaling group

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

Choose instance launch options

Choose the VPC network environment that your instances are launched into, and customize the instance types and purchase options.

Network

For most applications, you can use multiple Availability Zones and let EC2 Auto Scaling balance your instances across the zones. The default VPC and default subnets are suitable for getting started quickly.

VPC
Choose the VPC that defines the virtual network for your Auto Scaling group.

vpc-0e42b04dcc524de2b
172.31.0.0/16 Default

Create a VPC

Availability Zones and subnets
Define which Availability Zones and subnets your Auto Scaling group can use in the chosen VPC.

Select Availability Zones and subnets

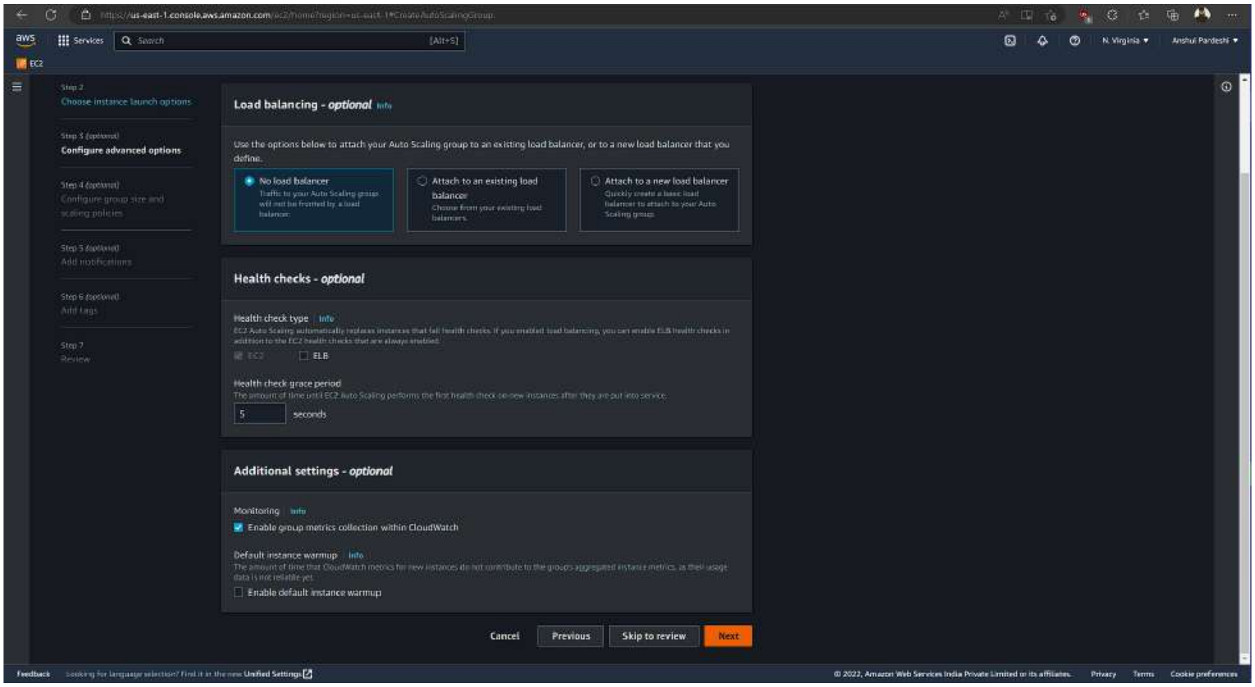
- ☑ us-east-1a | subnet-05aec43931284d3ed
  172.31.16.0/20 Default
- ☑ us-east-1b | subnet-0c386ad38162f89df
  172.31.32.0/20 Default
- ☑ us-east-1c | subnet-06d9b41ce8ce9fd16
  172.31.0.0/20 Default
- ☑ us-east-1d | subnet-096a919edc6a9c8ed
  172.31.80.0/20 Default
- ☑ us-east-1e | subnet-0682315c4350c5d75
  172.31.48.0/20 Default
- ☑ us-east-1f | subnet-09858f1c8de750fe2
  172.31.64.0/20 Default

us-east-1f | subnet-09858f1c8de750fe2
172.31.64.0/20 Default

Create a subnet

https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateAutoScalingGroup:
Services
Search
[Alt+S]
EC2
N. Virginia
Anshul Pardeshi
Info
Feedback
Looking for language selection? Find it in the new Unified Settings
© 2022, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences

Since we are not using load balancer here, lets go with no load balancer.



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

Load balancing - *optional*

Use the options below to attach your Auto Scaling group to an existing load balancer, or to a new load balancer that you define.

- ● No load balancer
  Traffic to your Auto Scaling group will not be fronted by a load balancer.
- ○ Attach to an existing load balancer
  Choose from your existing load balancers.
- ○ Attach to a new load balancer
  Quickly create a basic load balancer to attach to your Auto Scaling group.

Health checks - *optional*

Health check type
EC2 Auto Scaling automatically replaces instances that fail health checks. If you enabled load balancing, you can enable ELB health checks in addition to the EC2 health checks that are always enabled.

☑ EC2 ☐ ELB

Health check grace period
The amount of time until EC2 Auto Scaling performs the first health check on new instances after they are put into service.

5 seconds

Additional settings - *optional*

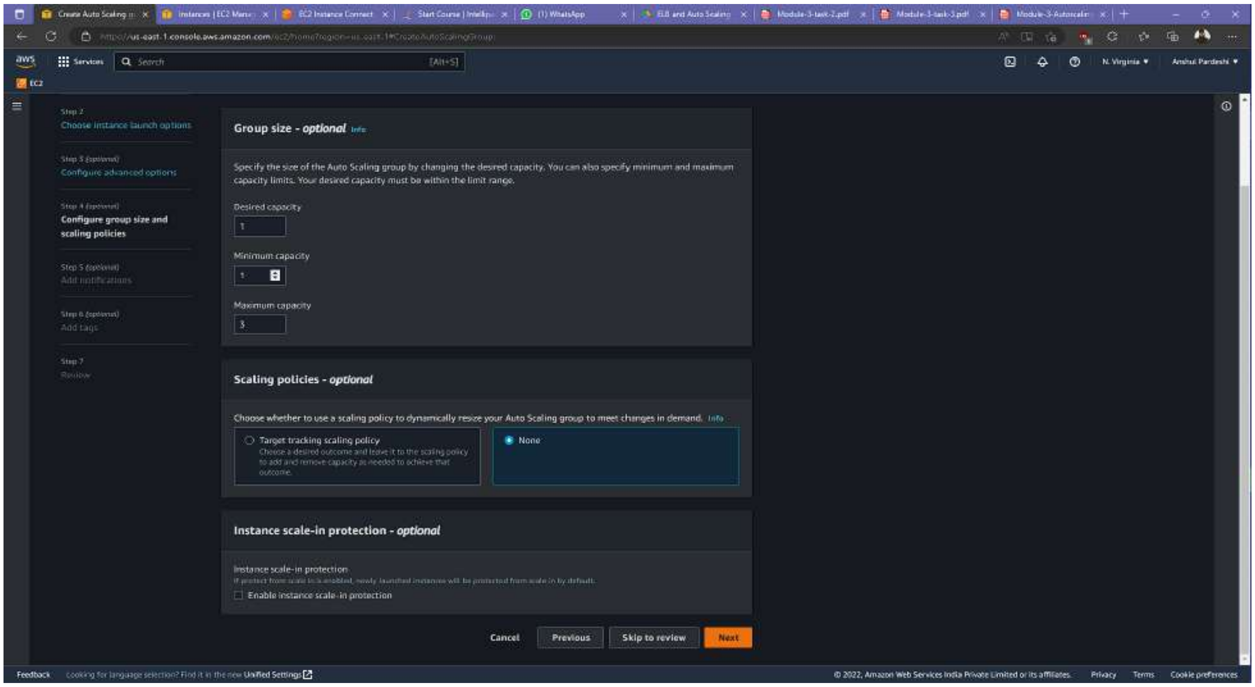
Monitoring
☑ Enable group metrics collection within CloudWatch

Default instance warmup
The amount of time that CloudWatch metrics for new instances do not contribute to the group's aggregated instance metrics, as their usage data is not reliable yet.

☐ Enable default instance warmup

https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateAutoScalingGroup:
Services
Search
[Alt+S]
EC2
N. Virginia
Anshul Pardeshi
Info
Cancel
Previous
Skip to review
Next
Feedback
Looking for language selection? Find it in the new Unified Settings
© 2022, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences

As mentioned in the assignment,select 1 minimum and 3 maximum instances.



Group size - *optional* Info

Specify the size of the Auto Scaling group by changing the desired capacity. You can also specify minimum and maximum capacity limits. Your desired capacity must be within the limit range.

Desired capacity: 1

Minimum capacity: 1

Maximum capacity: 3

Scaling policies - *optional*

Choose whether to use a scaling policy to dynamically resize your Auto Scaling group to meet changes in demand. Info

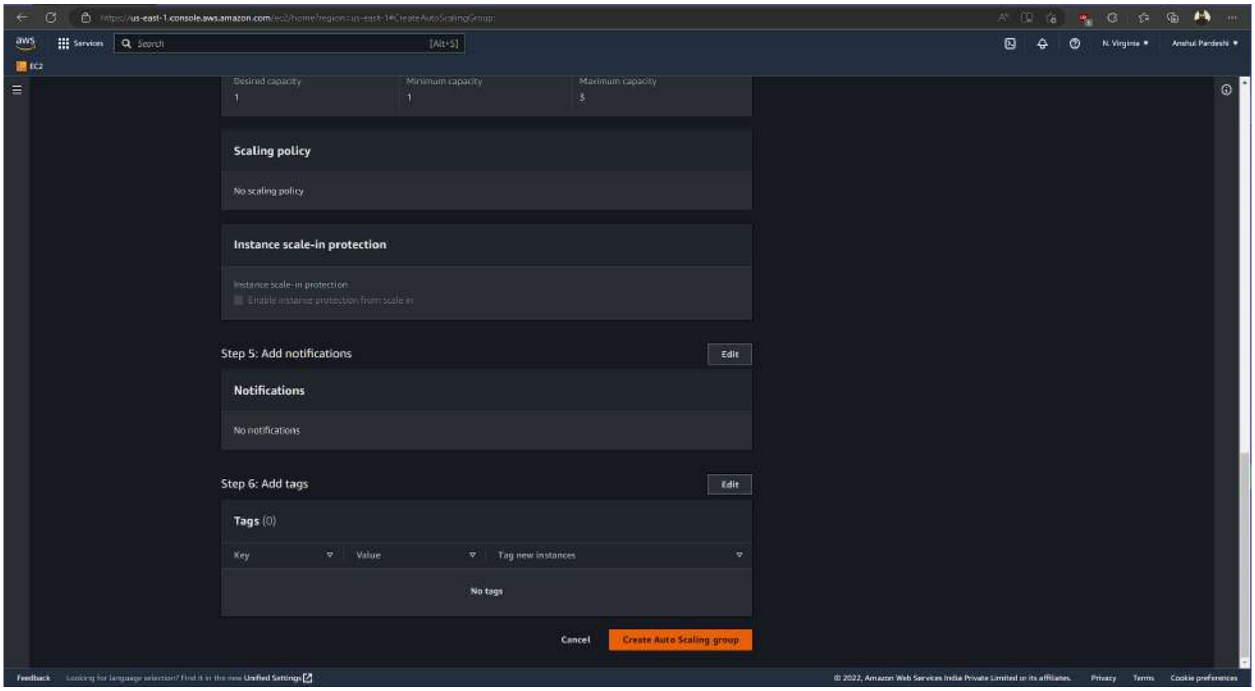
○ Target tracking scaling policy
Choose a desired outcome and leave it to the scaling policy to add and remove capacity as needed to achieve that outcome.

● None

Instance scale-in protection - *optional*

Instance scale-in protection
If protect from scale in is enabled, newly launched instances will be protected from scale in by default.

□ Enable instance scale-in protection


https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateAutoScalingGroup:
Services
Search
[Alt+S]
N. Virginia
Anshul Pardeshi
EC2
Edit
Edit
Cancel
Create Auto Scaling group
Feedback
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Desired capacity	Minimum capacity	Maximum capacity
1	1	3

Scaling policy

No scaling policy

Instance scale-in protection

Instance scale-in protection

□ Enable instance protection from scale in

Step 5: Add notifications

Notifications

No notifications

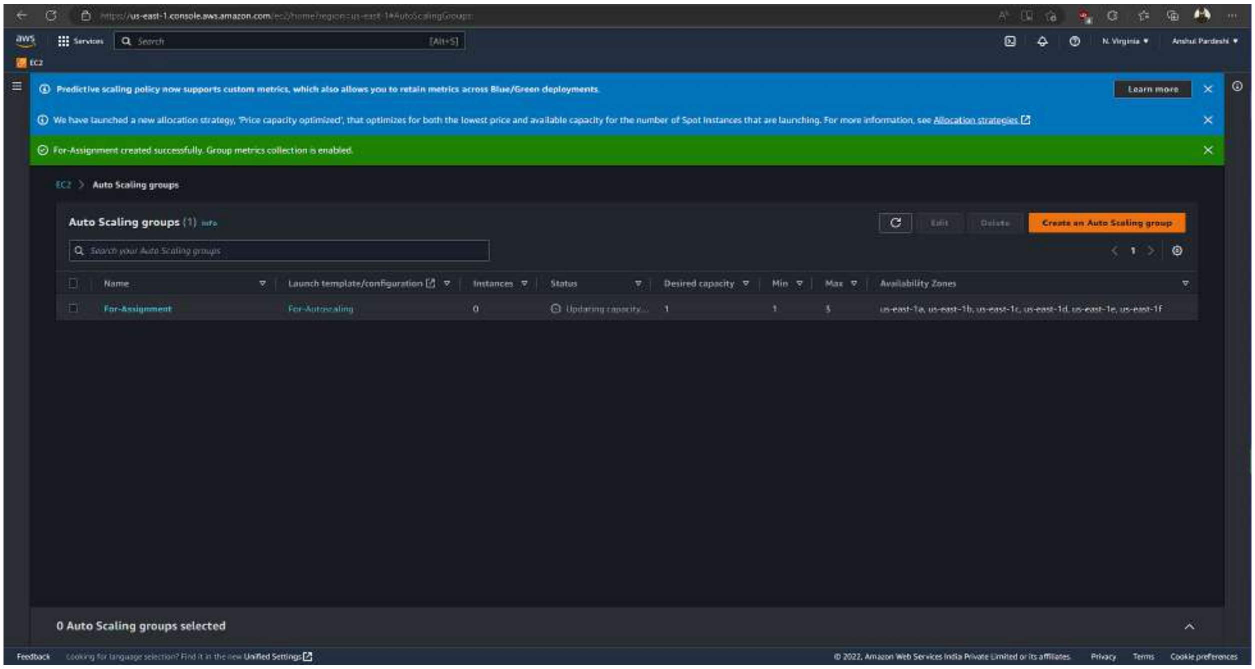
Step 6: Add tags

Tags (0)

Key	Value	Tag new instances

No tags

Keep rest things default and launch Autoscaling Group.


https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#AutoScalingGroups:
Services
Search
[Alt+S]
N. Virginia ▾
Anshul Pardeshi ▾
EC2
Learn more
EC2 > Auto Scaling groups
Edit
Delete
Create an Auto Scaling group
Search your Auto Scaling groups
Feedback
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Predictive scaling policy now supports custom metrics, which also allows you to retain metrics across Blue/Green deployments.

We have launched a new allocation strategy, 'Price capacity optimized', that optimizes for both the lowest price and available capacity for the number of Spot Instances that are launching. For more information, see Allocation strategies

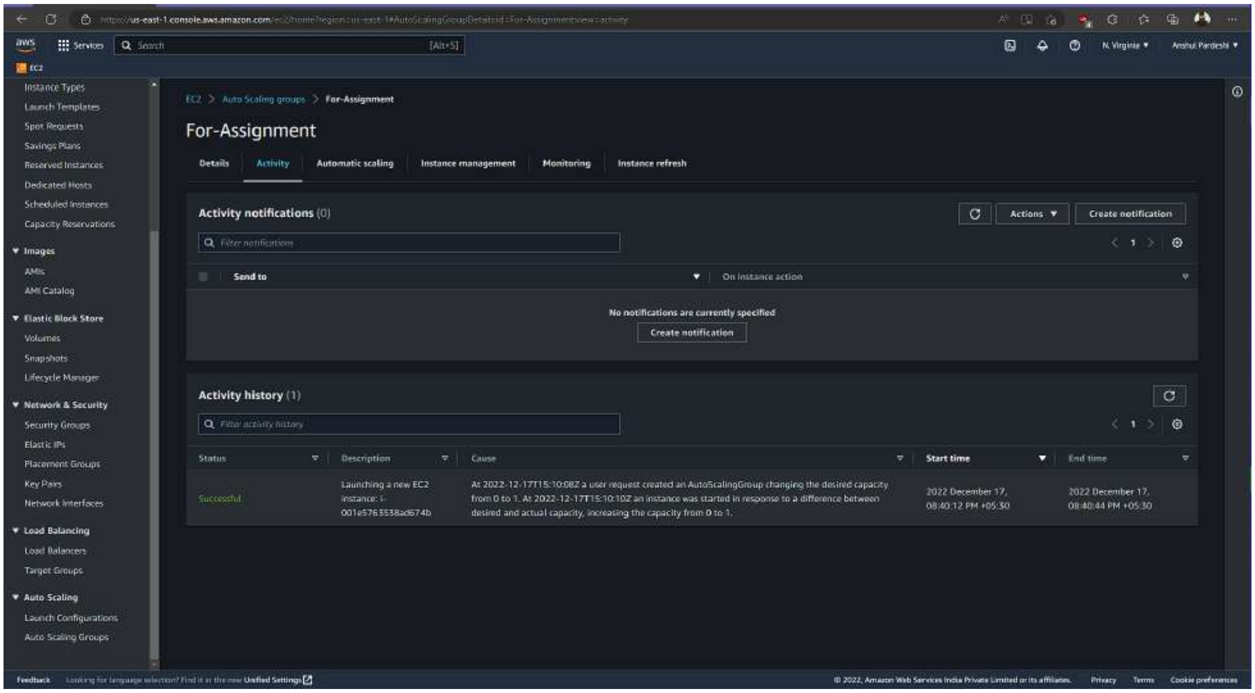
For-Assignment created successfully. Group metrics collection is enabled.

Auto Scaling groups (1) Info

Name	Launch template/configuration	Instances	Status	Desired capacity	Min	Max	Availability Zones
For-Assignment	For-Autoscaling	0	Updating capacity...	1	1	5	us-east-1a, us-east-1b, us-east-1c, us-east-1d, us-east-1e, us-east-1f

0 Auto Scaling groups selected

Open created autoscaling group and on activity you can see number of instances running.



For-Assignment

Activity notifications (0)

Send to	On instance action

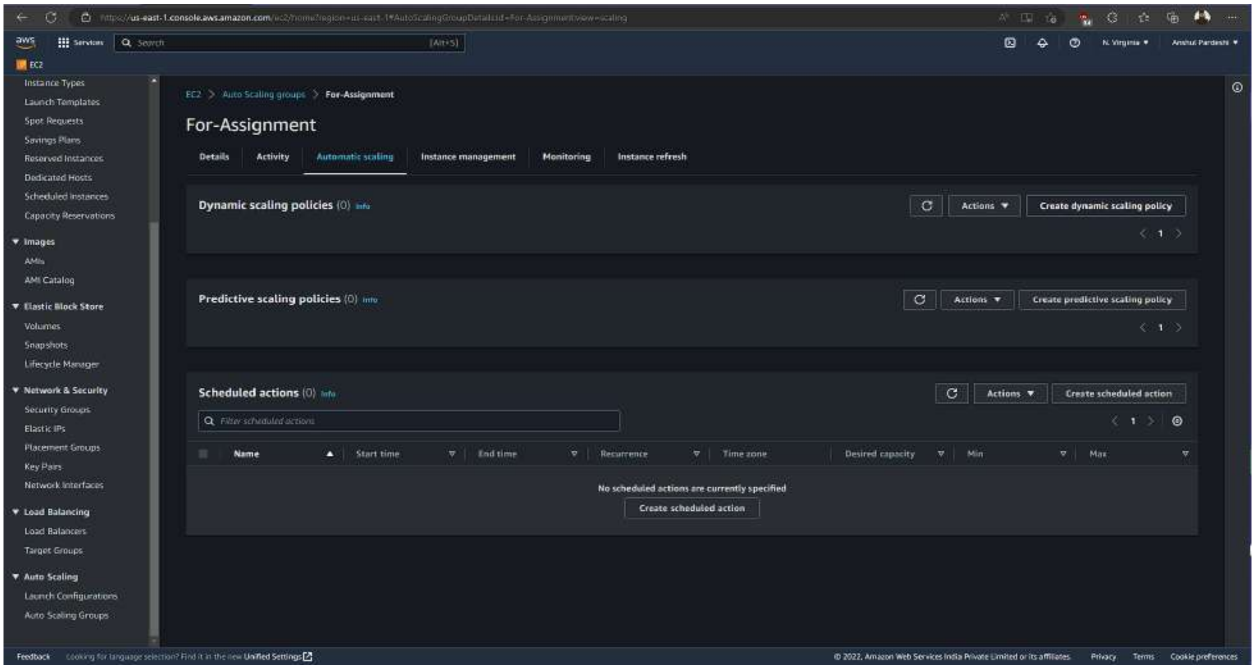
No notifications are currently specified

Create notification

Activity history (1)

Status	Description	Cause	Start time	End time
Successful	Launching a new EC2 instance: i-001e5763538ad674b	At 2022-12-17T15:10:08Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 1. At 2022-12-17T15:10:10Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2022 December 17, 08:40:12 PM +05:30	2022 December 17, 08:40:44 PM +05:30

Now to get result faster, let’s assign dynamic scaling policy.



EC2 > Auto Scaling groups > For-Assignment

For-Assignment

Dynamic scaling policies (0) Info

Predictive scaling policies (0) Info

Scheduled actions (0) Info

Filter scheduled actions

Name	Start time	End time	Recurrence	Time zone	Desired capacity	Min	Max

No scheduled actions are currently specified

Create scheduled action

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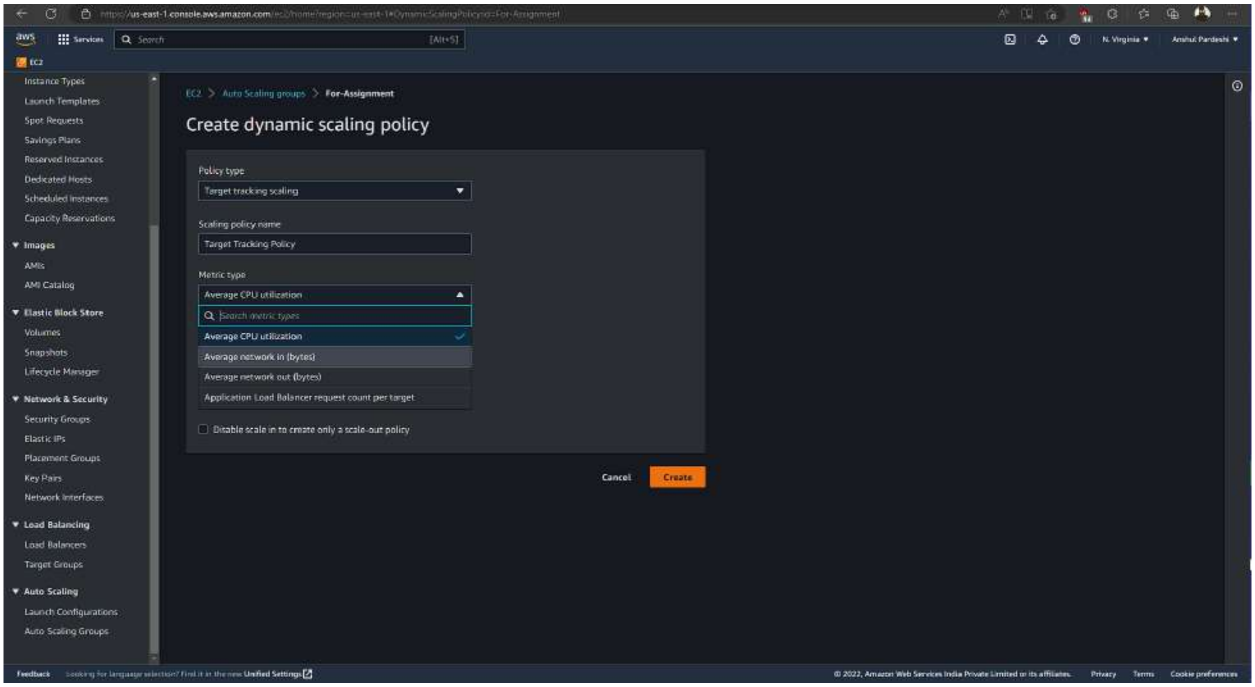

EC2 > Auto Scaling groups > For-Assignment

Create dynamic scaling policy

Policy type

Target tracking scaling

Scaling policy name

Target Tracking Policy

Metric type

Average CPU utilization

Search metric types

- Average CPU utilization ✓
- Average network in (bytes)
- Average network out (bytes)
- Application Load Balancer request count per target

□ Disable scale in to create only a scale-out policy

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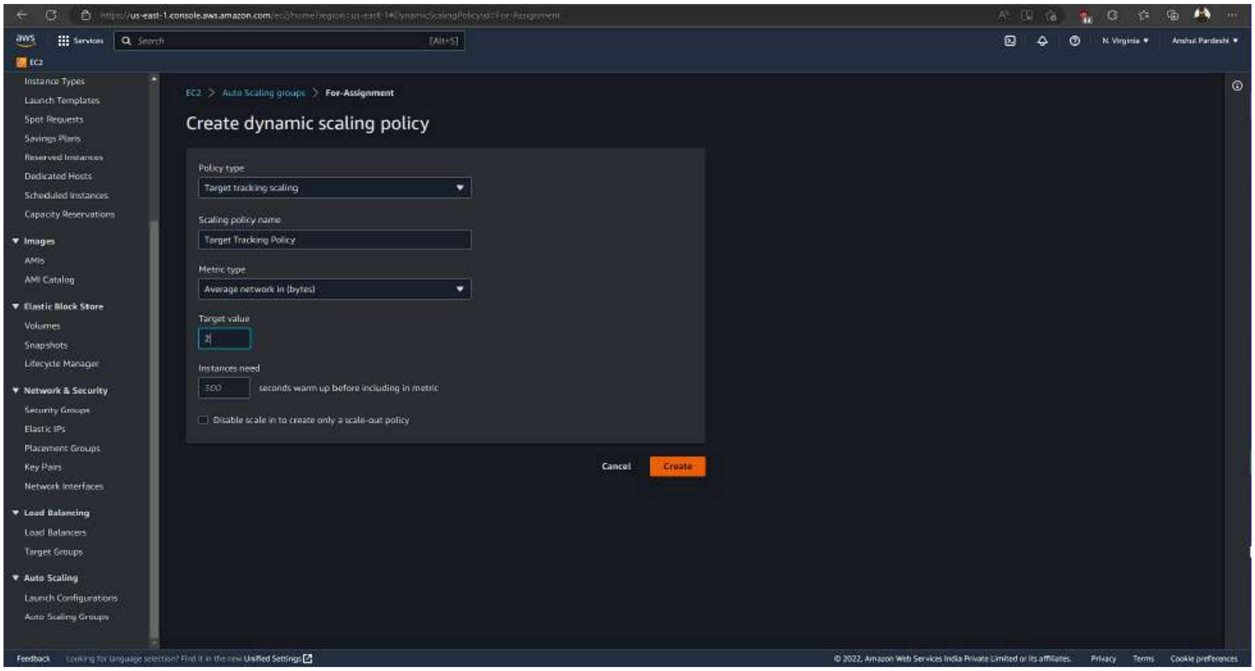
Set metric as Avg Network in (bytes)Set Target value as less as possible to get faster results.



EC2 > Auto Scaling groups > For-Assignment

Create dynamic scaling policy

Policy type: Target tracking scaling

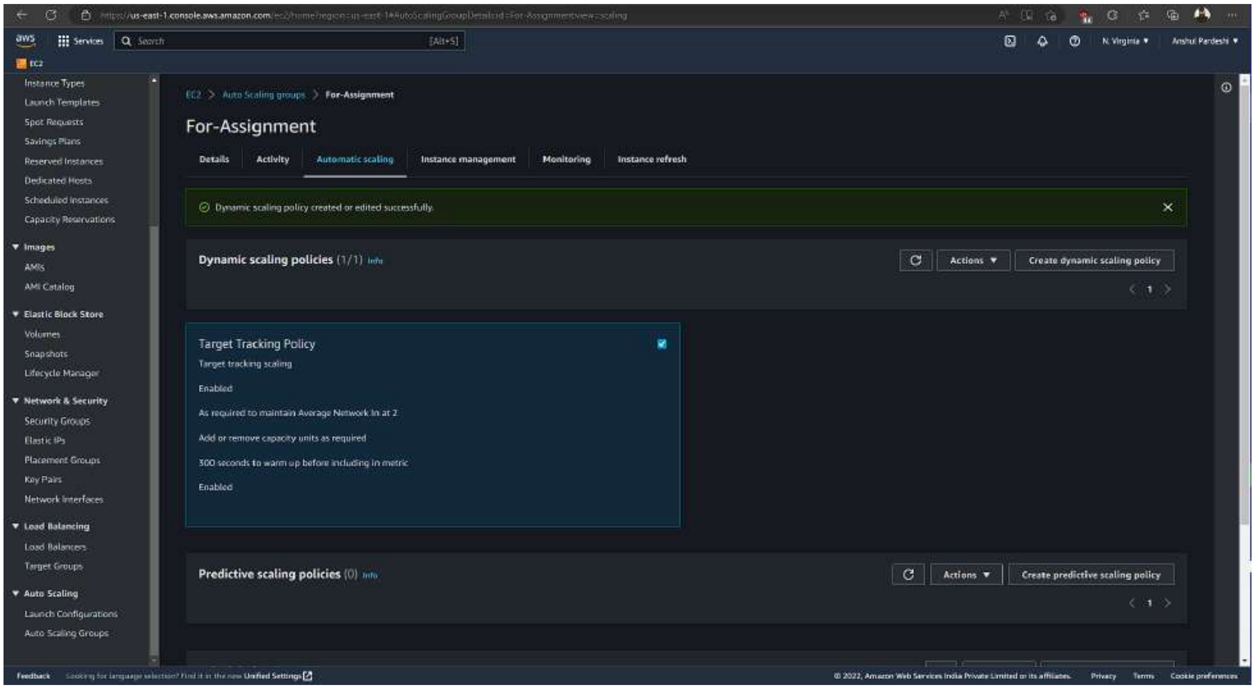
Scaling policy name: Target Tracking Policy

Metric type: Average network in (bytes)

Target value: 2

Instances need: 300 seconds warm up before including in metric

□ Disable scale in to create only a scale-out policy



EC2 > Auto Scaling groups > For-Assignment

For-Assignment

Dynamic scaling policy created or edited successfully.

Dynamic scaling policies (1/1) Info

Target Tracking Policy ☑

Target tracking scaling

Enabled

As required to maintain Average Network In at 2

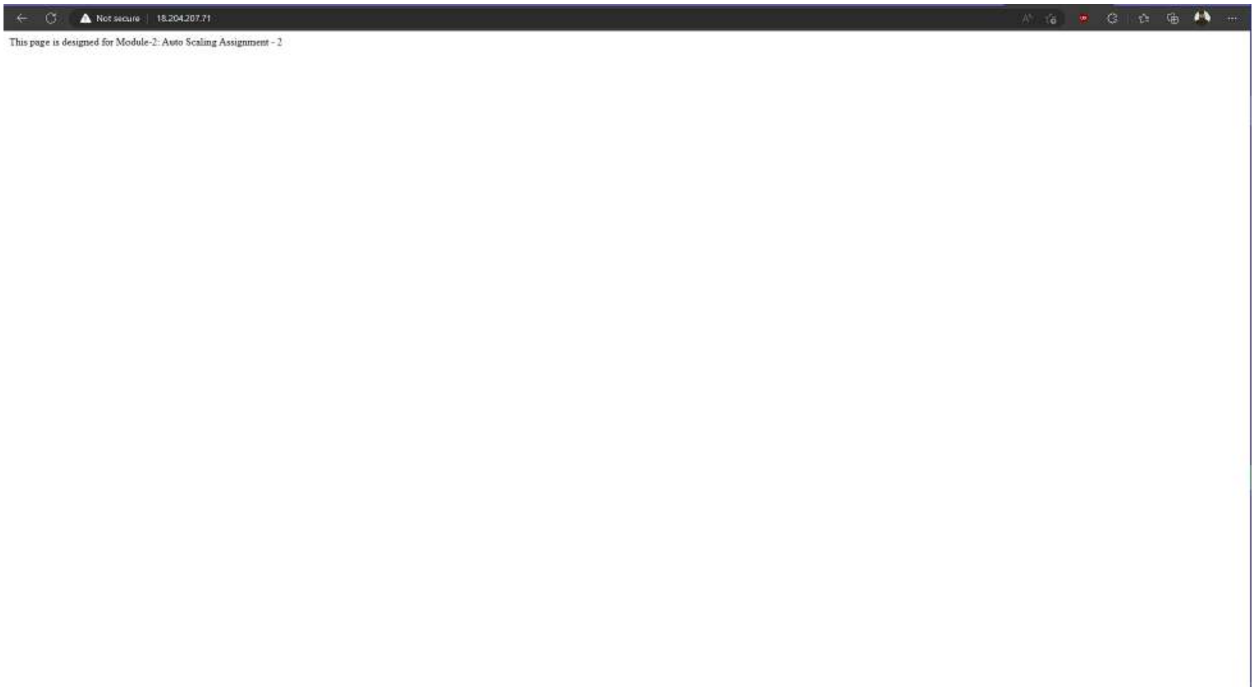
Add or remove capacity units as required

300 seconds to warm up before including in metric

Enabled

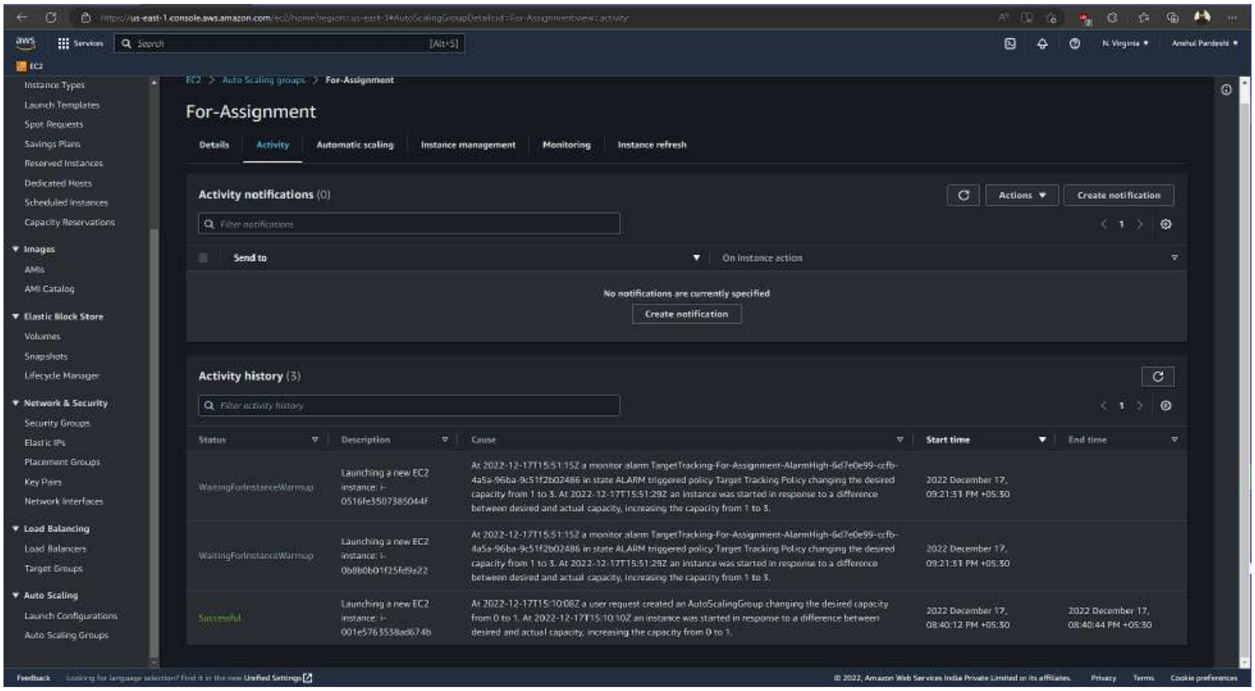
Predictive scaling policies (0) Info

**This is what we get after copying public ip of instance and pasting it in url.
Now refresh this too many times to overload website to test autoscaling group.**



This page is designed for Module-2: Auto Scaling Assignment - 2

Now in autoscalinggroup in activity you can see multiple instances being deployed by autoscaling group.



For-Assignment

Activity notifications (0)

Send to	On instance action

No notifications are currently specified

Activity history (3)

Status	Description	Cause	Start time	End time
WaitingForInstanceWarmup	Launching a new EC2 instance: i-0516fe3507385044f	At 2022-12-17T15:51:15Z a monitor alarm TargetTracking-For-Assignment-AlarmHigh-6d7e0e99-ccfb-4a5a-96ba-9c51f2b02486 in state ALARM triggered policy Target Tracking Policy changing the desired capacity from 1 to 3. At 2022-12-17T15:51:29Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 1 to 3.	2022 December 17, 09:21:31 PM +05:30	
WaitingForInstanceWarmup	Launching a new EC2 instance: i-0b8b0b01f25fd9a22	At 2022-12-17T15:51:15Z a monitor alarm TargetTracking-For-Assignment-AlarmHigh-6d7e0e99-ccfb-4a5a-96ba-9c51f2b02486 in state ALARM triggered policy Target Tracking Policy changing the desired capacity from 1 to 3. At 2022-12-17T15:51:29Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 1 to 3.	2022 December 17, 09:21:31 PM +05:30	
Successful	Launching a new EC2 instance: i-001e5763538ad674b	At 2022-12-17T15:10:08Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 1. At 2022-12-17T15:10:10Z an instance was started in response to a difference between desired and actual capacity, increasing the capacity from 0 to 1.	2022 December 17, 08:40:12 PM +05:30	2022 December 17, 08:40:44 PM +05:30

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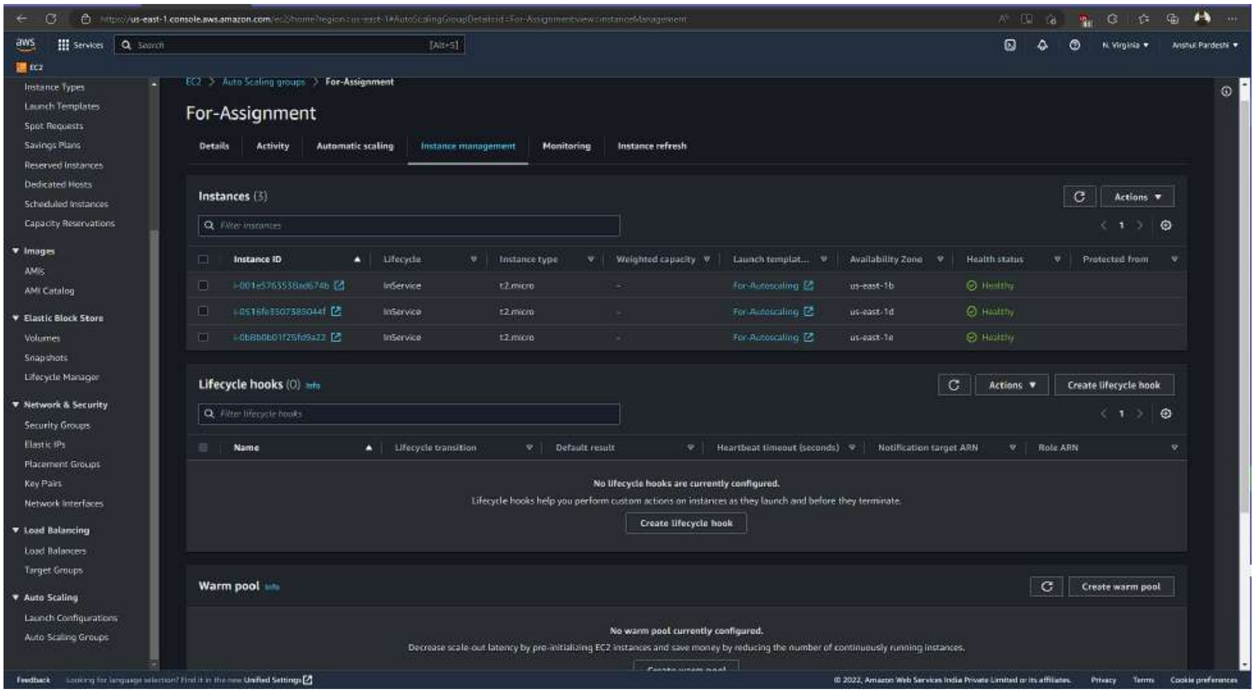

For-Assignment

Instances (3)

Instance ID	Lifecycle	Instance type	Weighted capacity	Launch templat...	Availability Zone	Health status	Protected from
i-001e5763538ad674b	InService	t2.micro	-	For-Autoscaling	us-east-1b	Healthy	
i-0516fe3507385044f	InService	t2.micro	-	For-Autoscaling	us-east-1d	Healthy	
i-0b8b0b01f25fd9a22	InService	t2.micro	-	For-Autoscaling	us-east-1e	Healthy	

Lifecycle hooks (0) Info

Name	Lifecycle transition	Default result	Heartbeat timeout (seconds)	Notification target ARN	Role ARN

No lifecycle hooks are currently configured.

Lifecycle hooks help you perform custom actions on instances as they launch and before they terminate.

Warm pool Info

No warm pool currently configured.

Decrease scale-out latency by pre-initializing EC2 instances and save money by reducing the number of continuously running instances.

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