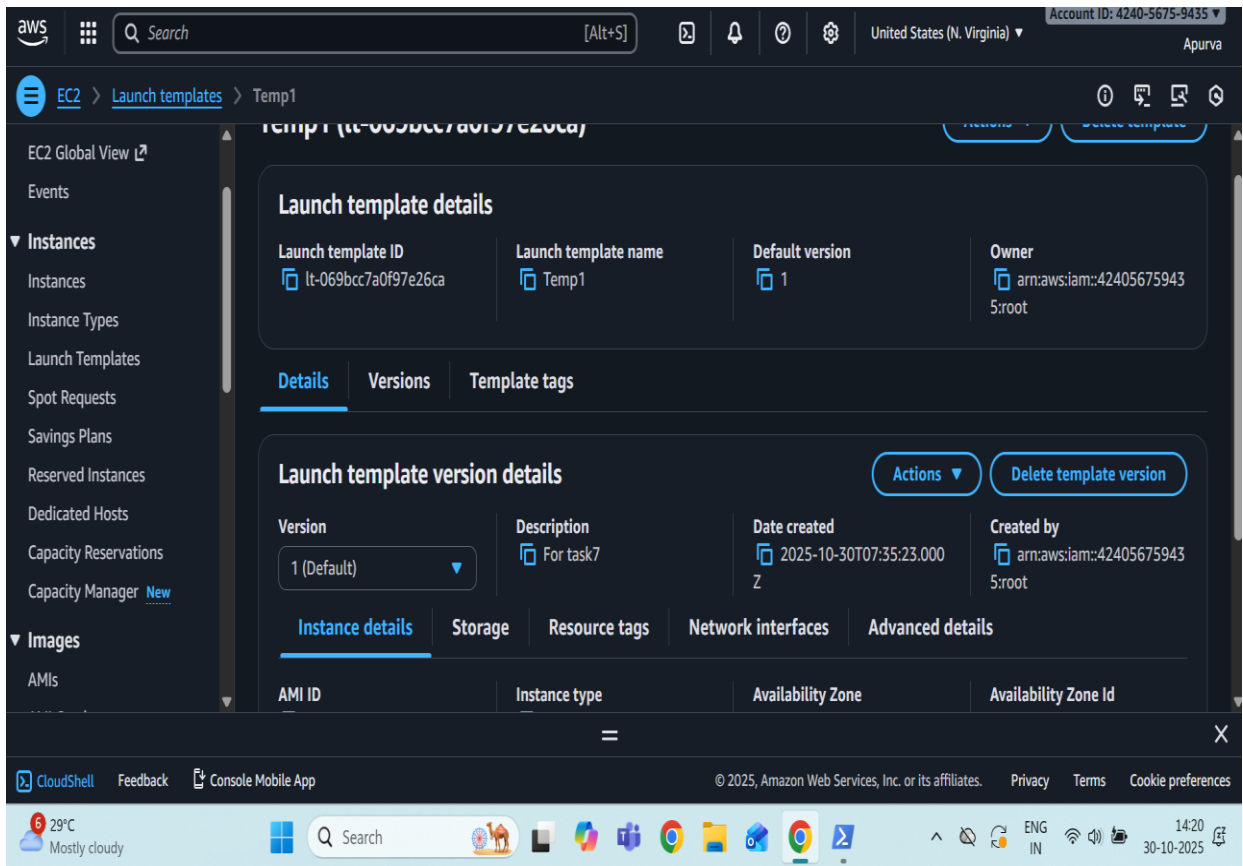
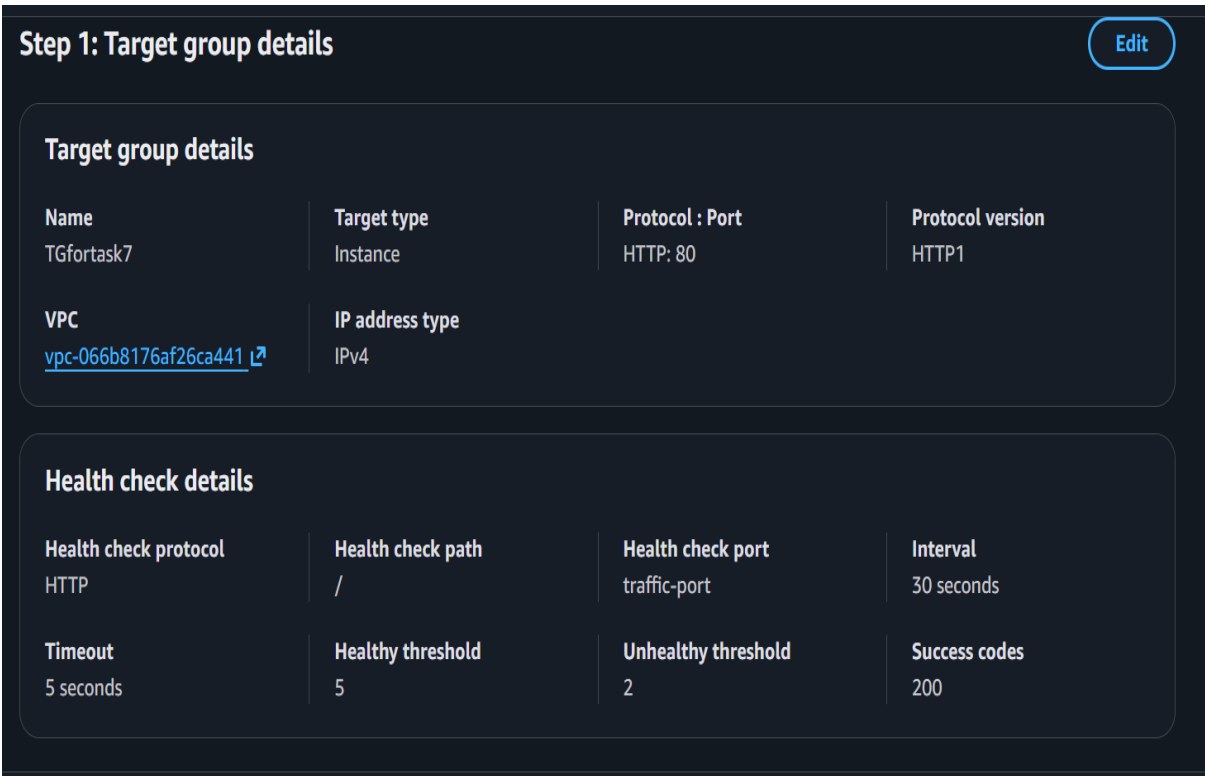


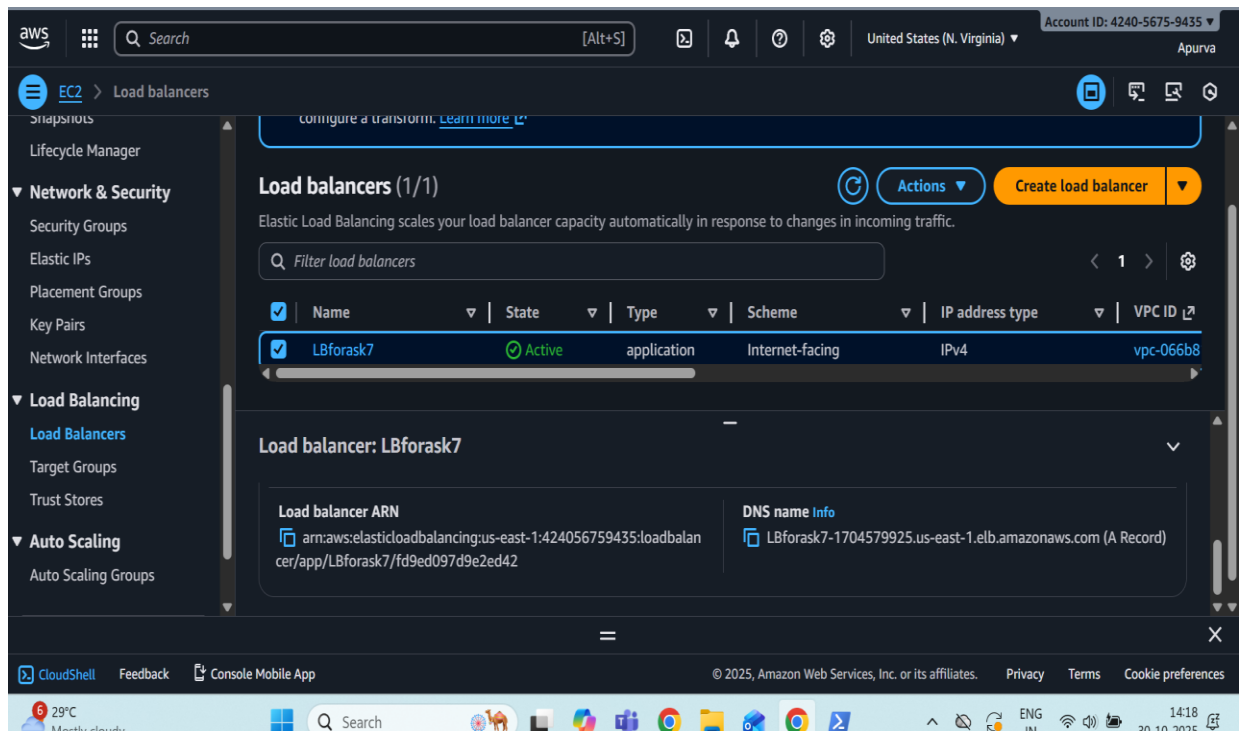
# 1. Launch Template (with user data)



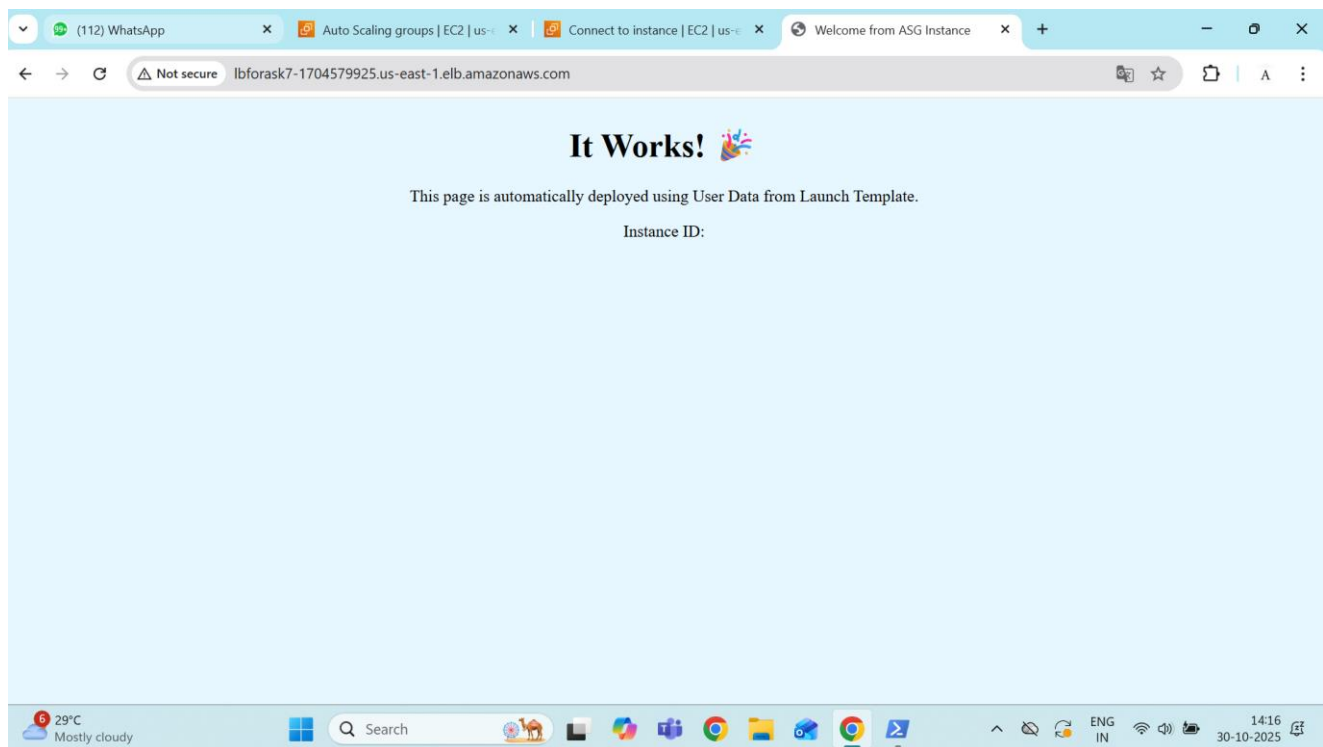
# 2. Target Group creation



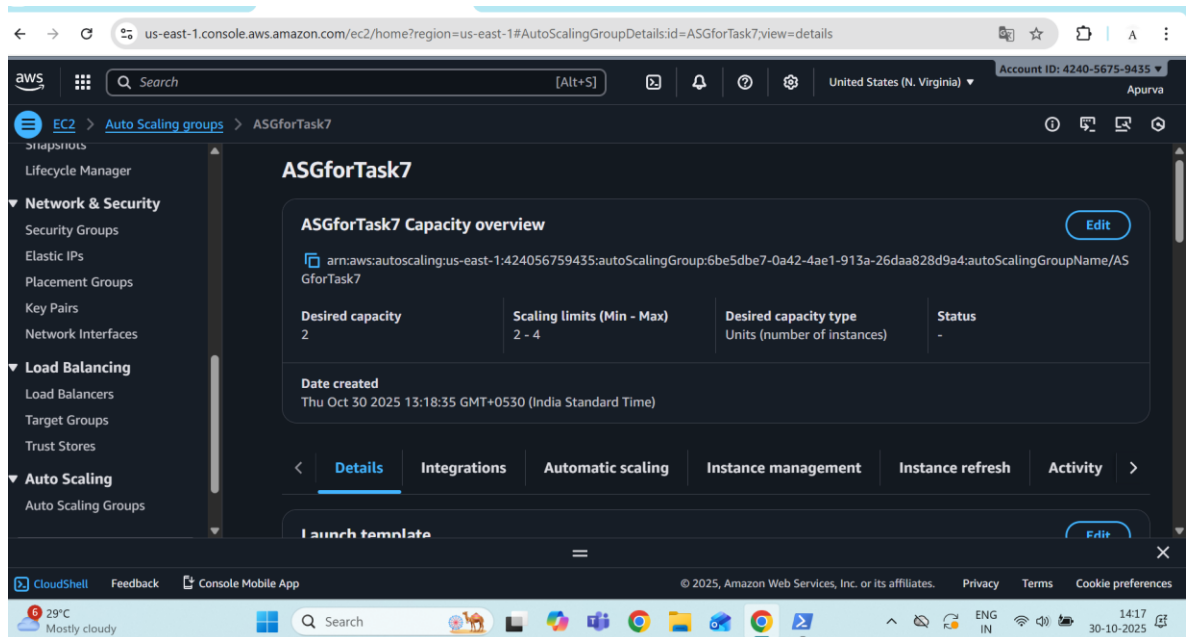
### 3. Load Balancer listener setup



### 4. Public load balancer URL (working app)



## 5.Auto Scaling Group details



## 6. Scaling Policy (Target Tracking)

### Target Tracking Policy

**Policy type**  
Target tracking scaling

**Enabled or disabled**  
Enabled

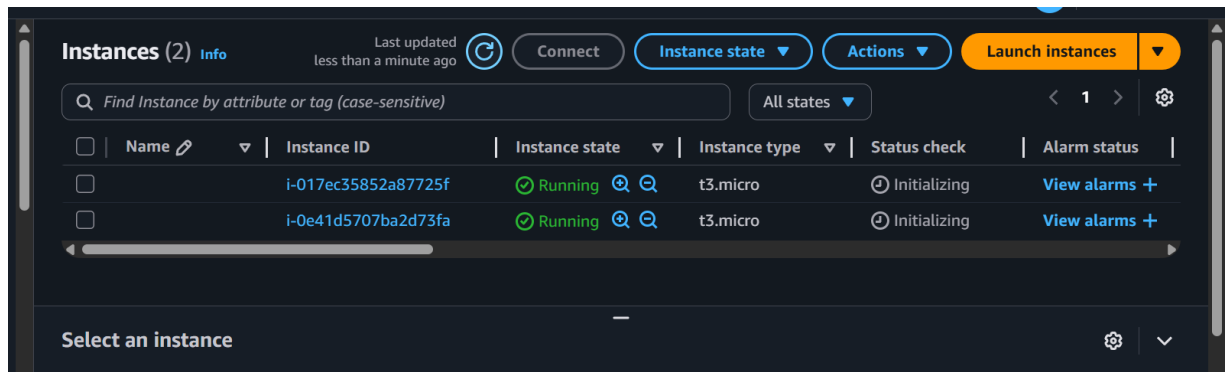
**Execute policy when**  
As required to maintain Average CPU utilization at 45

**Take the action**  
Add or remove capacity units as required

**Instances need**  
60 seconds to warm up before including in metric

**Scale in**  
Enabled

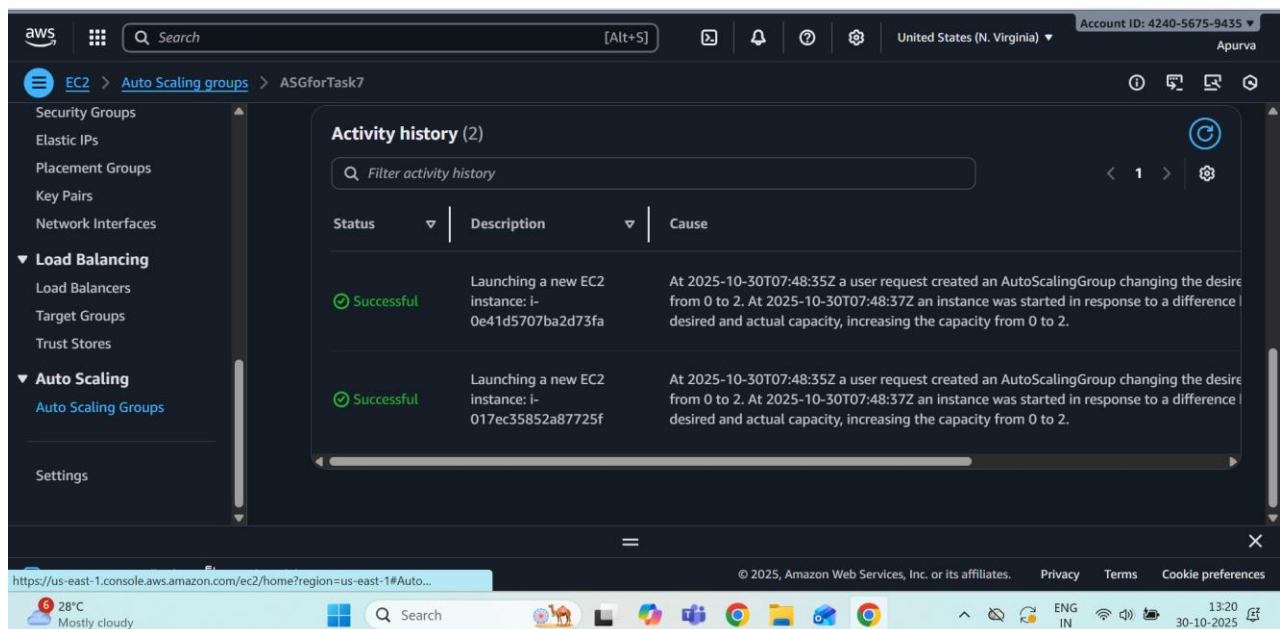
## 7. EC2 Instances list (Launched by ASG)



The screenshot shows the 'Instances (2)' page in the AWS Management Console. It features a search bar, a 'Find Instance by attribute or tag (case-sensitive)' input, and a 'All states' dropdown. Below the search bar is a table with columns: Name, Instance ID, Instance state, Instance type, Status check, and Alarm status. Two instances are listed, both in a 'Running' state. The first instance has ID 'i-017ec35852a87725f' and the second has ID 'i-0e41d5707ba2d73fa'. Both are 't3.micro' type. The status check for both is 'Initializing'. There are 'View alarms +' links for each instance. At the bottom, there is a 'Select an instance' button.

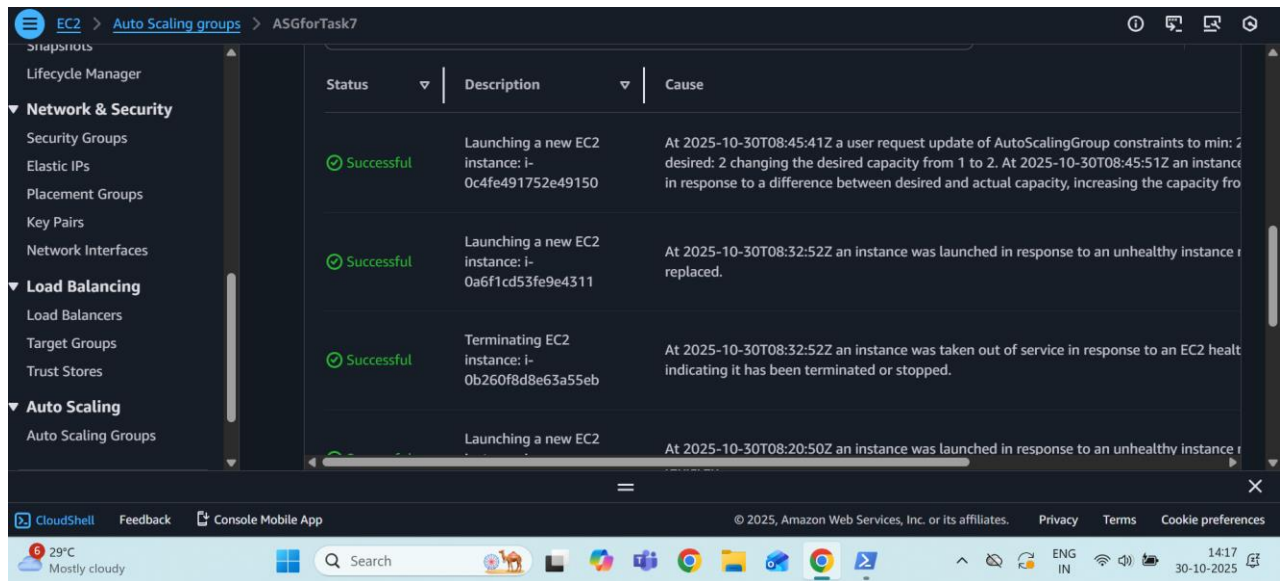
Name	Instance ID	Instance state	Instance type	Status check	Alarm status
	i-017ec35852a87725f	Running	t3.micro	Initializing	<a href="#">View alarms +</a>
	i-0e41d5707ba2d73fa	Running	t3.micro	Initializing	<a href="#">View alarms +</a>

## 8. ASG Activity

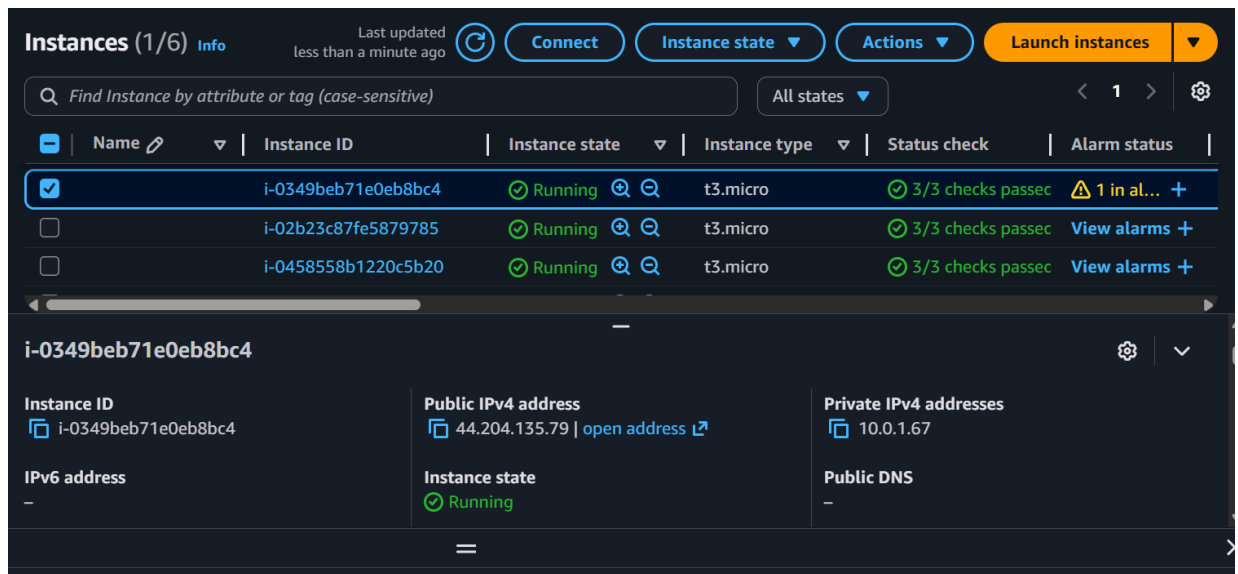


The screenshot shows the 'Activity history (2)' page in the AWS Management Console. It features a search bar, a 'Filter activity history' input, and a '1' dropdown. Below the search bar is a table with columns: Status, Description, and Cause. Two activities are listed, both with a 'Successful' status. The first activity is 'Launching a new EC2 instance: i-0e41d5707ba2d73fa' and the second is 'Launching a new EC2 instance: i-017ec35852a87725f'. The cause for both is 'At 2025-10-30T07:48:35Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 2. At 2025-10-30T07:48:37Z an instance was started in response to a difference between the desired and actual capacity, increasing the capacity from 0 to 2.'

Status	Description	Cause
Successful	Launching a new EC2 instance: i-0e41d5707ba2d73fa	At 2025-10-30T07:48:35Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 2. At 2025-10-30T07:48:37Z an instance was started in response to a difference between the desired and actual capacity, increasing the capacity from 0 to 2.
Successful	Launching a new EC2 instance: i-017ec35852a87725f	At 2025-10-30T07:48:35Z a user request created an AutoScalingGroup changing the desired capacity from 0 to 2. At 2025-10-30T07:48:37Z an instance was started in response to a difference between the desired and actual capacity, increasing the capacity from 0 to 2.



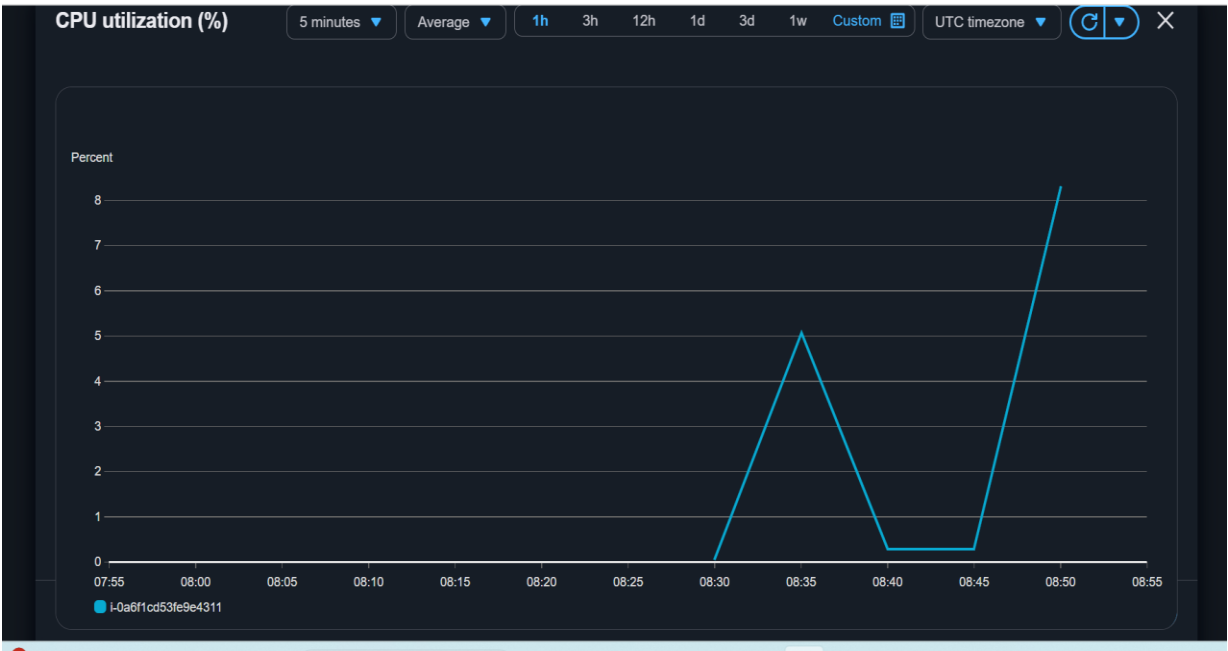
## 9. EC2 Instances list (during scale-out)



# CPU Utilization Increased using dd if=/dev/zero of=/dev/null &

```
[ec2-user@ip-10-0-1-67 ~]$ dd if=/dev/zero of=/dev/null &
[1] 25690
[ec2-user@ip-10-0-1-67 ~]$ top
top - 09:35:30 up 14 min, 1 user, load average: 1.00, 0.98, 0.64
Tasks: 106 total, 2 running, 104 sleeping, 0 stopped, 0 zombie
%Cpu(s): 29.0 us, 20.5 sy, 0.0 ni, 49.8 id, 0.0 wa, 0.0 hi, 0.5 si, 0.3 st
MiB Mem : 904.8 total, 363.1 free, 197.9 used, 343.8 buff/cache
MiB Swap: 0.0 total, 0.0 free, 0.0 used. 571.3 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
25690	ec2-user	20	0	221412	1008	916	R	99.3	0.1	11:40.14	dd
26239	ec2-user	20	0	224024	3484	2812	R	0.3	0.4	0:00.05	top
1	root	20	0	107176	17628	10760	S	0.0	1.9	0:01.53	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_par_gp
5	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	slub_flushwq
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	netns
8	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0H-events_highpri
9	root	20	0	0	0	0	I	0.0	0.0	0:00.03	kworker/u4:0-events_unbound
10	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_percpu_wq
11	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_kthread



# In Alarm condition

**Alarms (4)**

☐ Hide Auto Scaling alarms

Clear selection

Create composite alarm

Actions

Create alarm

Search

Alarm state: Any

Alarm type: Any

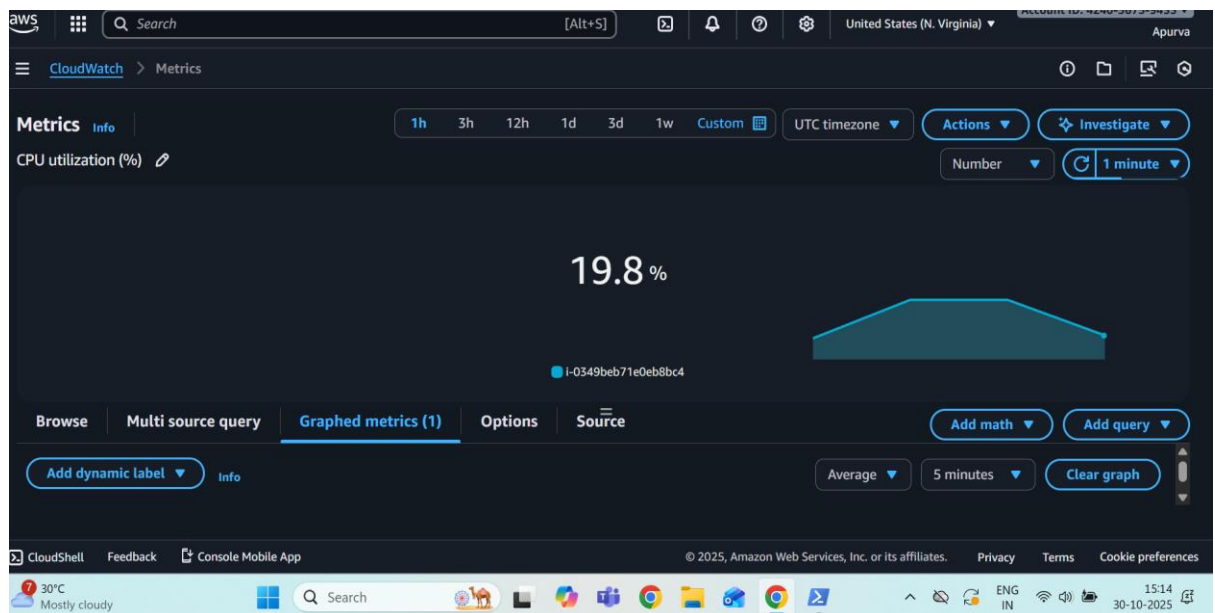
Actions status: Any

< 1 >

<input type="checkbox"/>	Name	State	Last state update (UTC)	Conditions
<input type="checkbox"/>	<a href="#">TargetTracking-ASGforTask7-AlarmHigh-e0cdd16c-ff6a-4971-8c01-c60aaf50eb7f</a>	<span>In alarm</span>	2025-10-30 09:34:01	CPUUtilization > 45 for 3 datapoints w minutes

## 10.ASG Activity tab (scale-in event)

After killing the cpu utilization dropped and asg terminated extra launched instances



Instances (6) Info

Last updated less than a minute ago

Refresh

Connect

Instance state ▾













Actions ▾

Launch instances ▾

All states ▾

< 1 >

⚙️

<input type="checkbox"/>	Name  ▾	Instance ID	Instance state ▾	Instance type ▾	Status check	Alarm status
<input type="checkbox"/>		i-02b23c87fe5879785	 Running  	t3.micro	 3/3 checks passed	<a href="#">View alarms +</a>
<input type="checkbox"/>		i-0458558b1220c5b20	 Terminated  	t3.micro	–	<a href="#">View alarms +</a>
<input type="checkbox"/>		<a href="#">i-041caad600cfa349f</a>	 Running  	t3.micro	 3/3 checks passed	<a href="#">View alarms +</a>

