

Practical 4

Name: Ishaan Bose

Reg. no: 2147116

1) Why the Auto Scaling feature is significant in cloud computing?

Autoscaling provides users with an automated approach to increase or decrease the compute, memory or networking resources they have allocated, as traffic spikes and use patterns demand. Without autoscaling, resources are locked into a particular configuration that provides a preset value for memory, CPU and networking that does not expand as demand grows and does not contract when there is less demand.

Autoscaling is a critical aspect of modern cloud computing deployments. The core idea behind cloud computing is to enable users to only pay for what they need, which is achieved in part with elastic resources -- applications and infrastructure that can be called on as needed to meet demand.

2) Describe the following

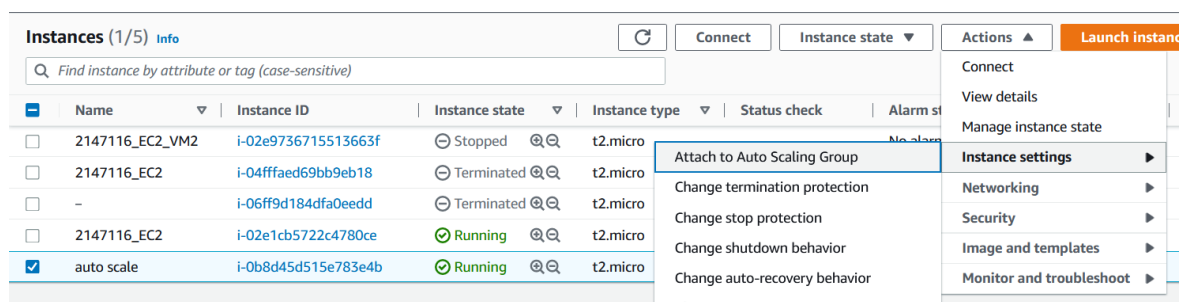
1. Metric-based autoscaling

2. Schedule-based autoscaling

1. An autoscaling action is triggered when a performance metric meets or exceeds a threshold.
2. Autoscaling events take place at the specific times that you schedule.

3) Demonstrate Metric based autoscaling or Schedule based auto scaling to cater your organizations business requirements. (Specify the requirements)

1. Go to your instances and select the desired instance.
2. Click on actions and then Instance settings -> Attach to Auto Scaling Group



3. Give a name to the auto scaling group and click attach

Attach to Auto Scaling group [Info](#)

Enable automatic scaling for an instance by attaching it to an Auto Scaling group.

Instance ID

i-0b8d45d515e783e4b (auto scale)

Public IPv4 DNS

ec2-3-87-143-196.compute-1.amazonaws.com

Auto Scaling Group

Choose an existing Auto Scaling group or enter a name to create a new Auto Scaling group.

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

4. Scroll to Auto Scaling in the Navigation Panel and select Auto Scaling Groups under Auto Scaling

Auto Scaling groups (1) [Info](#)

[Edit](#) [Delete](#) [Create an Auto Scaling group](#)

< 1 >

<input type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min
<input type="checkbox"/>	scheduled_auto_scaling	scheduled_auto_scaling	1	-	1	0

5. Select the created auto scaling group, go to automatic scaling and scroll down to scheduled actions.

Auto Scaling groups (1/1) [Info](#)

[Edit](#) [Delete](#) [Create an Auto Scaling group](#)

< 1 >

<input checked="" type="checkbox"/>	Name	Launch template/configuration	Instances	Status	Desired capacity	Min
<input checked="" type="checkbox"/>	scheduled_auto_scaling	scheduled_auto_scaling	1	-	1	0

Auto Scaling group: scheduled_auto_scaling

< 1 >

Scheduled actions (0) [Info](#)

[Actions](#) [Create scheduled action](#)

< 1 >

<input type="checkbox"/>	Name	Start time	End time	Recurr...	Time zone	Desired...	Min	Max
No scheduled actions are currently specified								

[Create scheduled action](#)

6. Click on create scheduled action.
7. Provide a suitable name, enter desired, minimum, and maximum capacity according to your needs
8. Select the desired time zone and select the desired date and time.

Create scheduled action

Name

scheduled_action

Provide at least one value for Desired, Min, or Max Capacity

Desired capacity

3

Min

1

Max

5

Recurrence

Once

Time zone

Etc/UTC

Current time in selected time zone is 2022-11-08/05:19 UTC

Specific start time

Schedule a specific date and time for the first scheduled action to run. Interpreted in recurrence time zone: Etc/UTC

2022/11/08

05:22

Etc/UTC

Learn more about scheduled scaling

Cancel

Create

9. Click create.

Auto Scaling groups (1/1)

Search your Auto Scaling groups

1

Name	Launch template/configuration	Instances	Status	Desired capacity	Min
scheduled_auto_scaling	scheduled_auto_scaling	1	-	1	0

Auto Scaling group: scheduled_auto_scaling

Scheduled action created or edited successfully

Scheduled actions (1)

Filter scheduled actions

1

Name	Start time	End time	Recurr...	Time zone	Desired...	Min	Max
scheduled...	2022 November 08, 10:52:00 AM +05:30			Etc/UTC	3	1	5

10. Once the selected time has passed, go back and view all instances.

11. New instances should be created.

Instances (7)								
Find instance by attribute or tag (case-sensitive)								
	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input type="checkbox"/>	2147116_EC2	i-02e1cb5722c4780ce	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-34-228-8-
<input type="checkbox"/>	2147116_EC2	i-04fffaed69bb9eb18	Terminated	t2.micro	-	No alarms	us-east-1d	-
<input type="checkbox"/>	-	i-08e543fd31cc348f5	Running	t2.micro	Initializing	No alarms	us-east-1d	ec2-54-174-11-
<input type="checkbox"/>	-	i-0f6fe1633685ae823	Running	t2.micro	Initializing	No alarms	us-east-1d	ec2-54-210-27-
<input type="checkbox"/>	-	i-06ff9d184dfa0eedd	Terminated	t2.micro	-	No alarms	us-east-1d	-
<input type="checkbox"/>	auto scale	i-0b8d45d515e783e4b	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-3-87-143-