ASG ------{Auto scaling Group}

Collection of ec2 instances that treated as logical grouping for auto scaling

&& management.

Used for automatic scaling && self-healing

Use LT or LC {Launch Template or launch configuration}

You define minimum,maximum,desired capacity.

Keep ec2 instances running similar to desired capacity by provisioning or

terminate instances.

Scaling policies automate based on metric.

Scaling policies ----🡪

1. Manual scaling
2. Schedule scaling
3. Simple scaling
4. Dynamic scaling
5. Target Tracking
6. Cooldown periods
7. Step scaling

ASG can use health check of Load Balancer instead of EC2 status check.

What is meaning of self-healing ?

Means if instance status check fails or it manually terminated -🡪

ASG will launch new instance instead of failed one.

ASG + LB

ASG instances are added or removed from Target Group automatic.

A diagram of a computer

Description automatically generated

ASG is free but you pay for resources you create.

Use ASG with ALB {Application load balancer} for elasticity.

ASG Scaling policies ---------------🡪

1. ASG not need for defining Scaling policies its optional but you must

Specify minimum,maximum,desired capacity.

EX -------- simple scaling

A diagram of a group

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Step scaling :-------

A diagram of steps scaling

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ASG can scale based on SQS (Approximate number of visible messages)

For simple && step scaling need cloud watch Alarm.

ASG lifecycle hooks ----🡪

Allow to define custom instance actions to be executed during ASG Actions.

(Paused or Terminated).

Instance launch or instance termination transitions.

Instances are paused in flow .

Instances when paused ----------🡪 it remain in wait state until

1. Timeout period (default 1 hour ) ends
2. Complete lifecycle command or Complete lifecycle operation.

Notifications of lifecycle hooks can send to

1. SNS
2. Event bridge to initiate other processes based on hooks.

State changes when timeout period ends or complete lifecycle action.

A diagram of a process

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A diagram of a system

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SSl ----------🡪

Load balancer secure connection using ------🡪

1. ssl -bridging
2. ssl-pass through
3. ssl-offload

ssl -bridging ----------🡪