**Auto Scaling**

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Auto Scaling helps you ensure that you have the correct number of EC2 instances available to handle the load for your application.

You create collections of EC2 instances, called Auto Scaling groups.

You can specify the minimum number of instances and the maximum number of instances in Auto Scaling group, and Amazon EC2 Auto Scaling ensures that your group never goes above this size.

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Step 1: Create load balancer.

Step 2: Create Launch configuration

Step 3: Create Topic in SNS (Simple Notification Service)

Step 4: Create Auto scaling group.

Step 5: Create Alarm in CloudWatch

Step 6: Add Policy in Auto Scaling

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**Step 1:** Create load balancer

Select Mumbai location

EC 2 dashboard -- load balancer -- create load balancer

Load balancer Name - SampleLB16

Next -- Create new Security group

Security group name - Sample-Sg16

Description - Sample-Sg16

Let’s open two ports SSH and HTTP

Next --> Configure health check

Response timeout -2

Interval -5

Unhealthy threshold - 2

Healthy threshold -2

Next --Next -- Review and create --> Create---> Close

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**Step 2:**

Creating launch configuration

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Under Auto Scaling

Select Launch configurations ---> Create launch configuration

Name: SampleLCG16

AMI -- ami-08e0ca9924195beba

Step 2: t2 micro

In advanced Details User data

#!/bin/bash

sudo su

yum update -y

yum install httpd -y

cd /var/www/html

echo "MyGoogle-2" > index.html

service httpd start

chkconfig httpd on

Next --> Select existing security group: Sample-Sg16

Create new key pair -- Key Pair name - SampleKP17 -- download key pair --> create launch configuration.

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**Step 3:** Create Topic in SNS

Services -- Application Integration -- Simple Notification Service

Create Topic

Type - Standard

Name - MyTopic1

Display Name - MyTopic1

Create topic.

Add subscriptions to the topic

Create Subscription

Protocol - Email

Endpoint - sunildevops77@gmail.com

Create Subscription.

Confirm the subscription through the link received in email

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**Step 4:** Create Auto Scaling Group

Select the Launch Configuration ---> Actions --- Create Auto Scaling Group

Step 1: Auto Scaling group name - SampleASG16

Step 2: Subnet -- ap-south-1a

Step 3: Attach Existing Load Balancer ---> Choose from Classic Load Balancers -- Select Load Balancer

Step 4: Configure Group size (Take Defaults)

Step 5: Next

Step 6: Next -- Provide Name Tag

Step 7: Review and Create

As the desired capacity is 1, By this time one EC2 Machine could have been created.

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**Step 5:** Create Alarm in CloudWatch

Services ---- Management & Governance --- CloudWatch

Alarm --- Create Alarm

Select Metric ---> EC2 --- By Auto Scaling Group ---- Select Auto Scaling Group Name, Metric Name – CPUUtilization

-- Select Metric ---Conditions --- Static -- Greater than 80 -- Next ---Select existing SNS topic (MyTopic1) -- Next ---

Alarm Name - My\_Alarm1 -- Next -- Create Alarm.

Similarly Create another Alarm for CPU Utilization <30

Name - My\_Alarm2

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**Step 6:** Add Policy in Auto Scaling

Select AutoScaling groups -- Automatic Scaling Tab --- Add Policy

Policy Type - Simple Scaling

Scaling policy name – Increase Policy

CloudWatch Alarm - My\_alarm1

Take the Action - Add - 1 Unit (EC2 Machine)

Create

Similarly, we need to create another Decrease Policy

Scaling policy name – Decrease Policy

CloudWatch Alarm - My\_alarm2

Take the Action - Remove - 1 Unit (EC2 Machine)

Create

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**Deleting process**

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1) Delete Autoscaling

2) Delete launch configuration (Instances will be terminated automatically)

3) Delete Load balancer

4) Delete Topic in notification service

5) Delete Alarm in cloud watch