Getting Started with AWS - Launch Configuration for an Auto Scaling Group in AWS

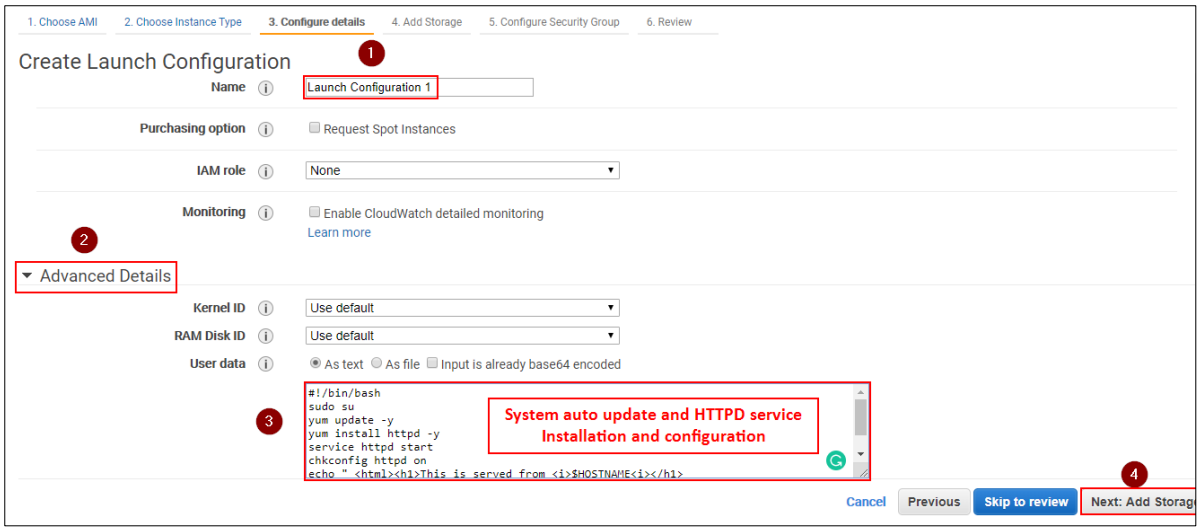
Launch Configurations

A launch configuration is an instance configuration template that an Auto Scaling group uses to launch EC2 instances. When you create a launch configuration, you specify information for the instances. Include the ID of the Amazon Machine Image (AMI), the instance type, a key pair, one or more security groups, and a block device mapping. If you've launched an EC2 instance before, you specified the same information in order to launch the instance.

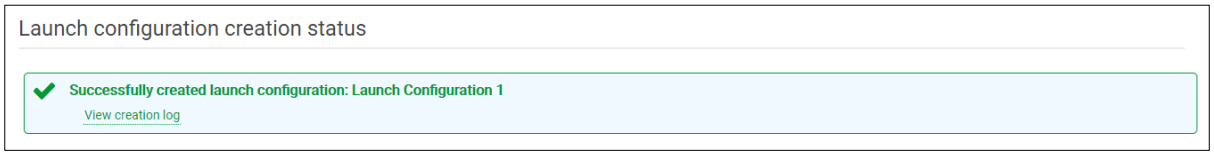
Step 1: To create the launch configuration for an Auto Scaling group (console).

1. Open the Amazon EC2 console at **https://console.aws.amazon.com/ec2/.**
2. In the navigation pane, choose **Launch Configurations**.
3. Select or choose "**Create launch configuration**."
4. Select an AMI (operating system) Linux **"Next"**
5. Select an instance types optimized to fit different use cases "**general purpose t2.micro**" Next

   Provide the name for your launch configuration and you can add or skip the script for HTTPD service installation.



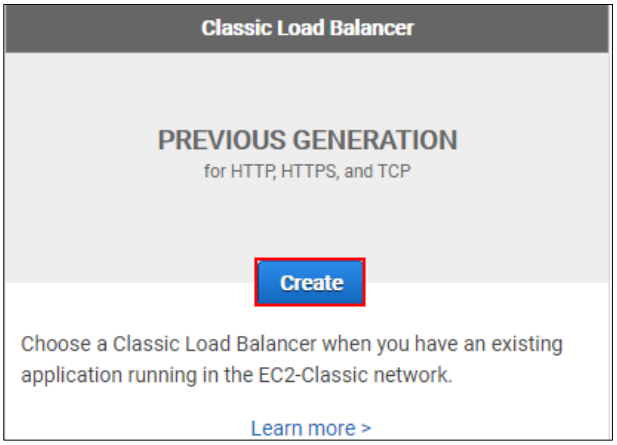
6. Add the storage click "Next"
7. Create or assign a security group "Next"
8. Create and launch the **configuration**
9. Select the security **Key** pair



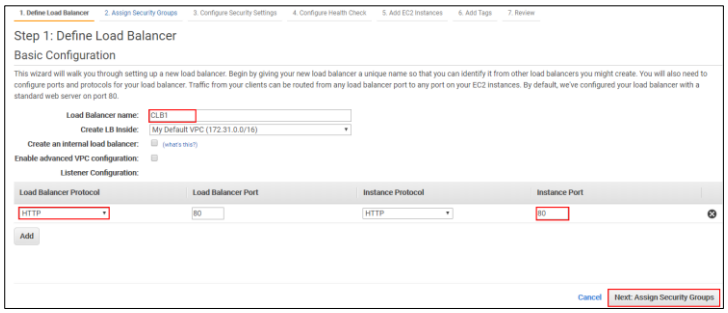
Add a Load Balancer (Console)

Step 2: Attaching a Load Balancer to Your Auto Scaling Group

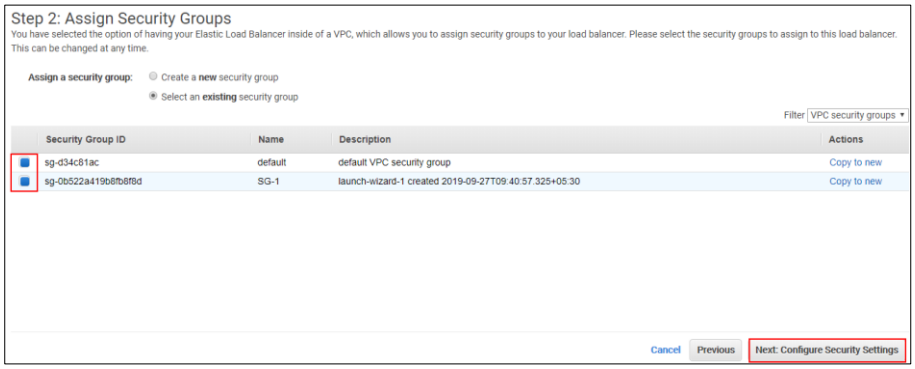
1. On the navigation pane, under **Load Balancers**, choose **Create Load Balancer**
2. Select **Classic Load Balancers**



Define the name of **Load Balancer** and select the port **“80”**

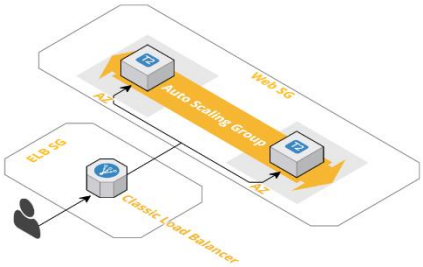


Select the Security group

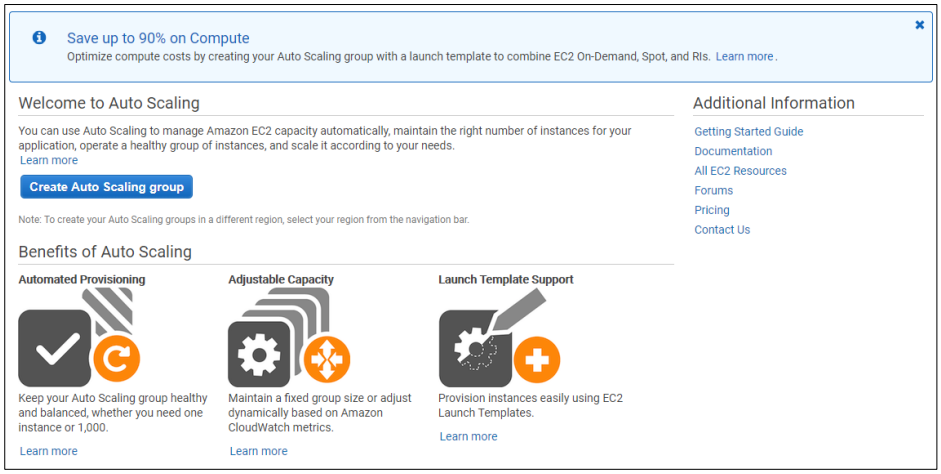


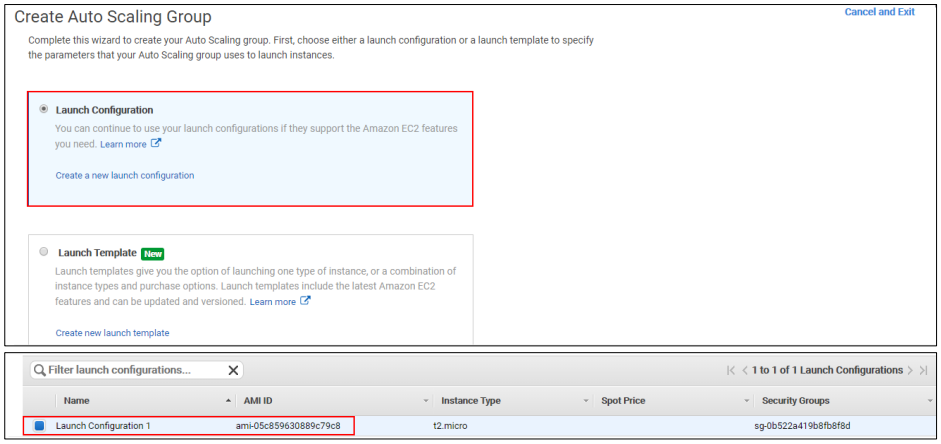
Configure security settings click **“next”**

Configure Health Check



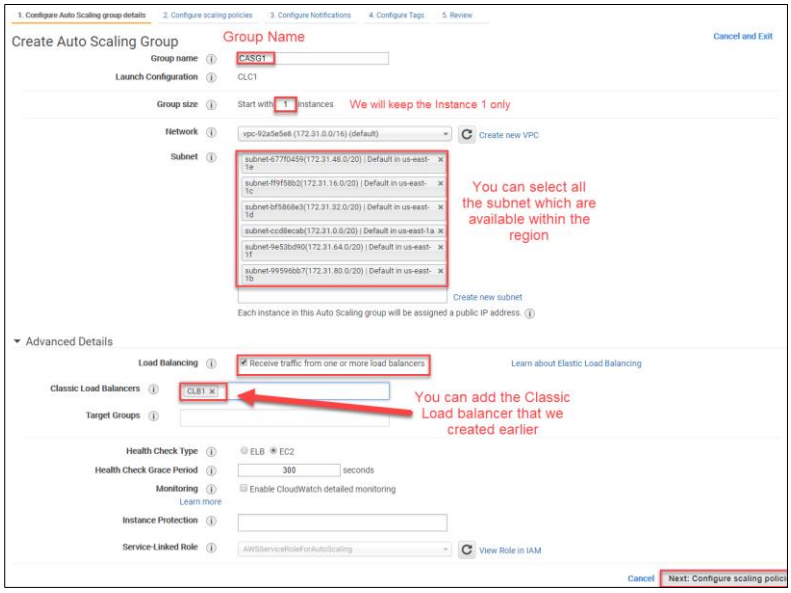
On the confirmation page, we choose to go and create your Auto Scaling groups.
Choose **Create Auto Scaling group**





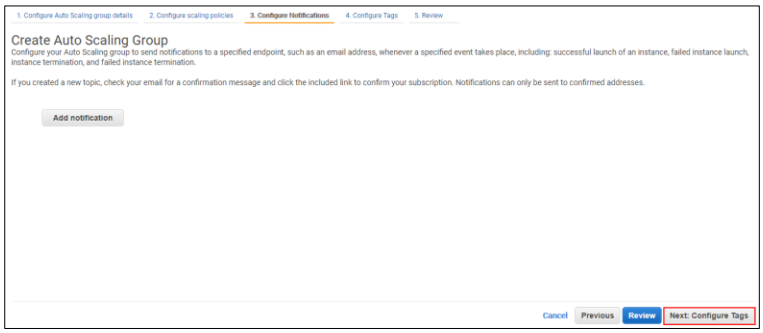
“Group name”
For **Subnet**, choose a subnet for the VPC.

Note
You can choose the Availability Zone for your instance by choosing its corresponding default subnet.



On the **Configure scaling policies** page, select **Keep this group at its initial size** and choose **Review**.

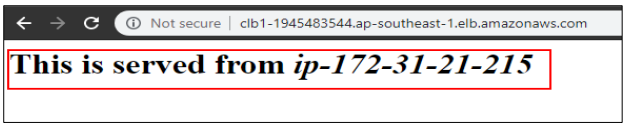
On the **Review** page, choose **Create Auto Scaling group**.



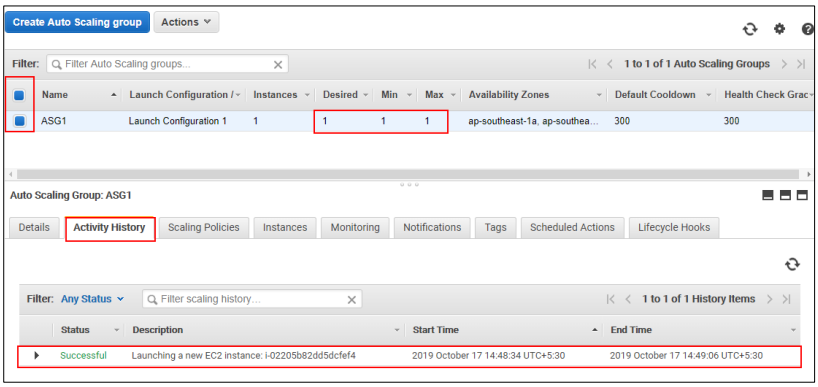
On the **Auto Scaling group creation status** page, choose **Close**.

Done

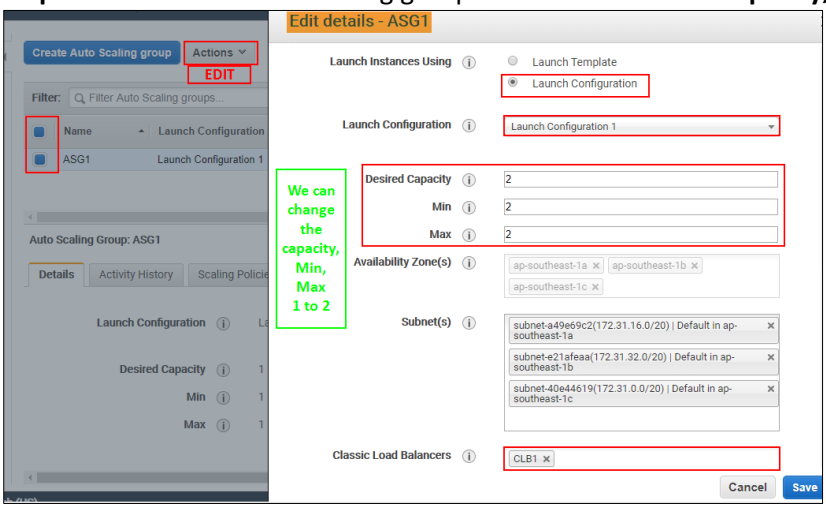
Step 3: Please check your EC2 Instance is ready from your auto scaling lunch configuration.



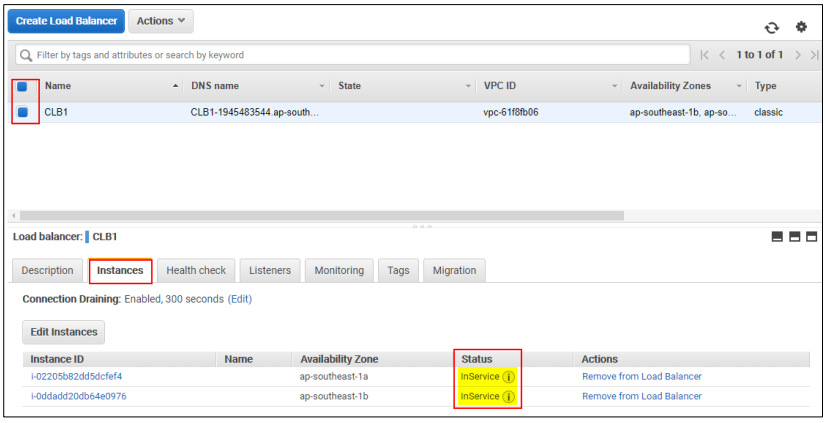
Step 4: Check the status of autoscaling group with **one instance.**



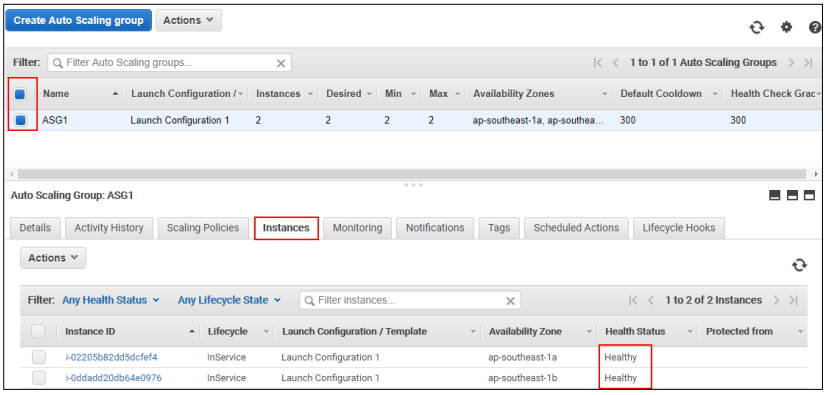
Steps 5: We can edit auto scaling group and make it Desired **capacity, Min, Max 2**



Steps 6: Now we can check in Load Balancers if there is **“two Instance are there”**
You can check the same at EC Running Instances.

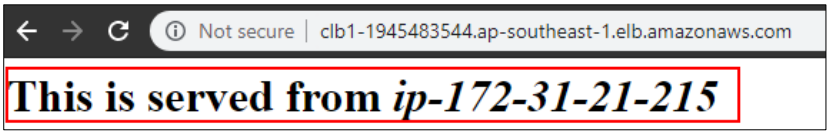


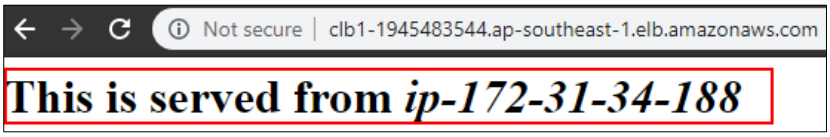
Steps 7: Same we can check the Instances **health status.**



Steps 8: Now you can access the Instance using DNS service.

http://clb1-1945483544.ap-southeast-1.elb.amazonaws.com/

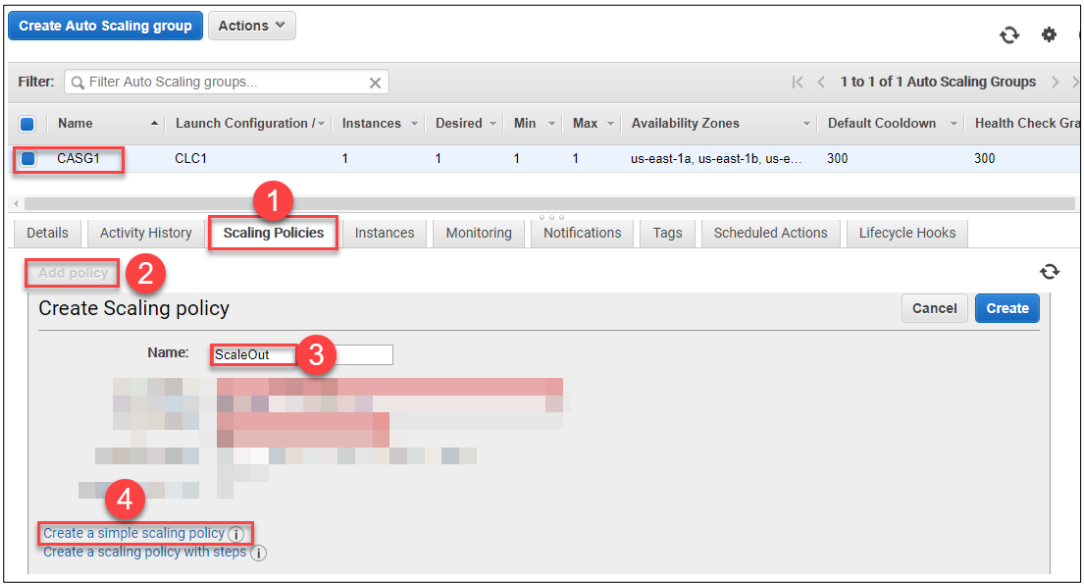




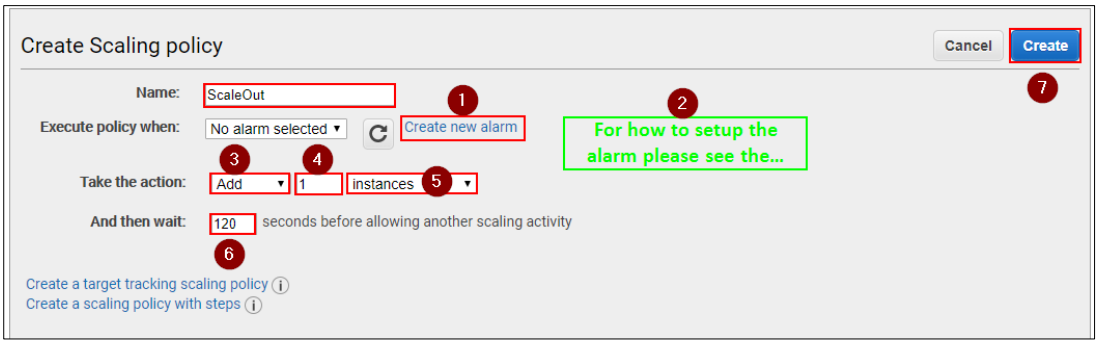
Done

A) Configure simple scaling policy

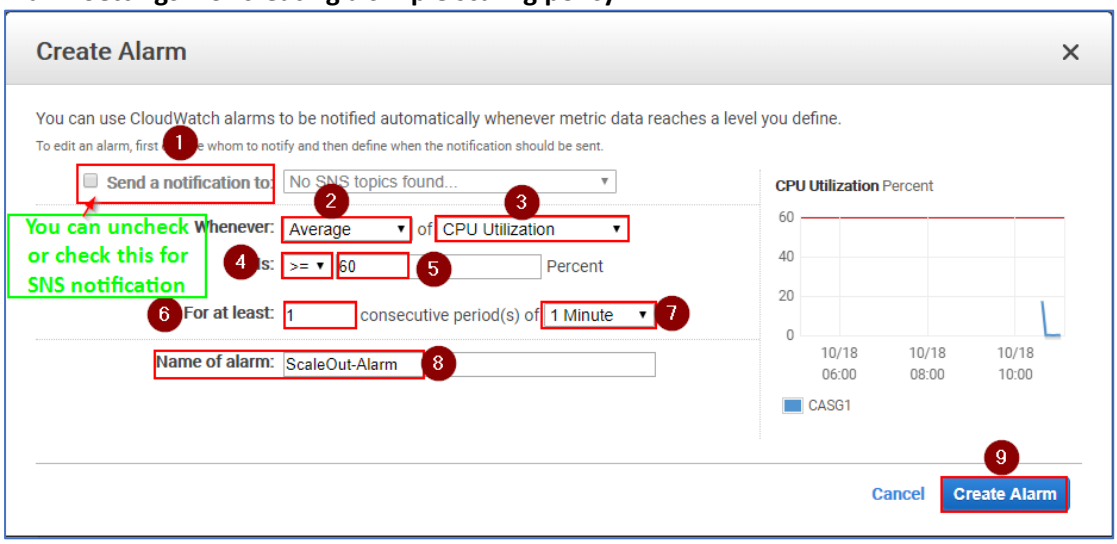
Go to Auto scaling group configure the settings as per the table below.



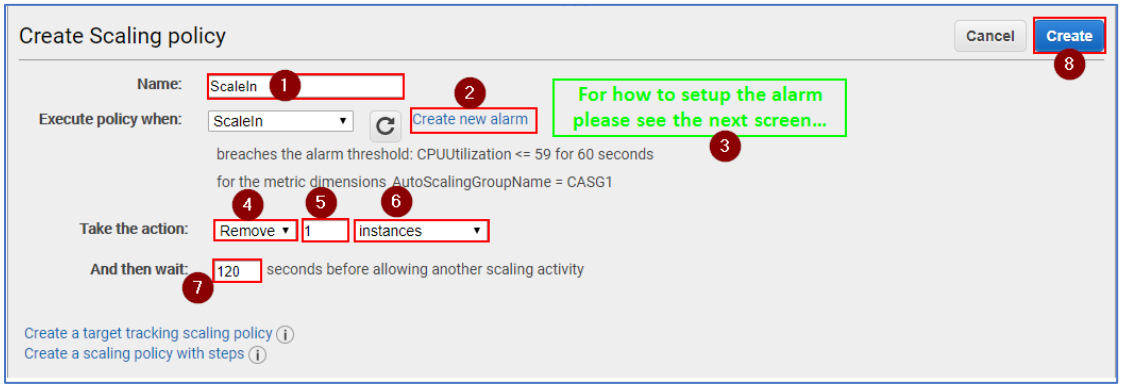
Creating simple scaling Out policy for average above the 60% (Add the new Instance)



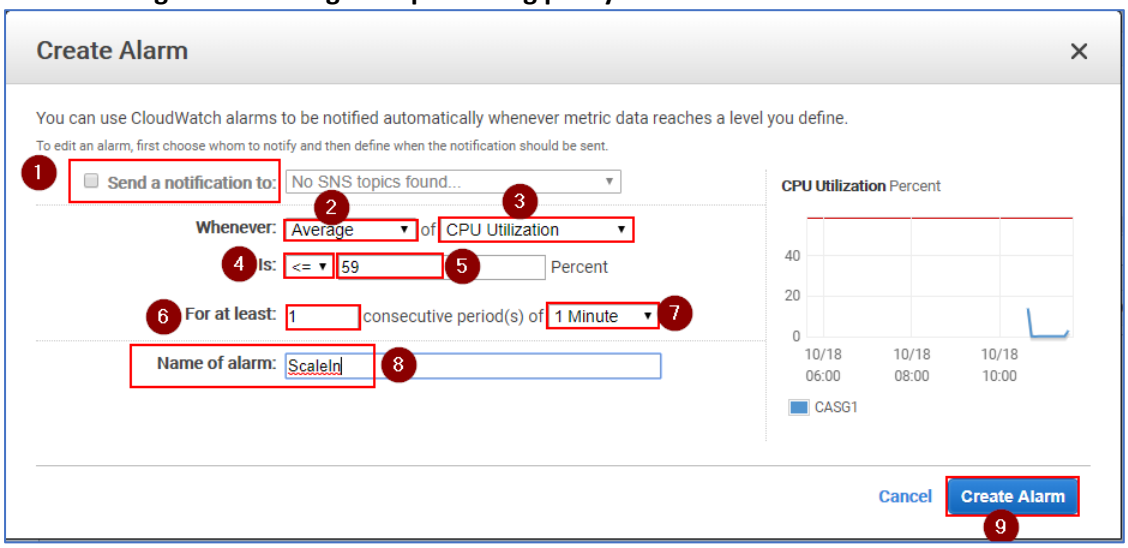
Alarm Settings: For creating a simple scaling policy

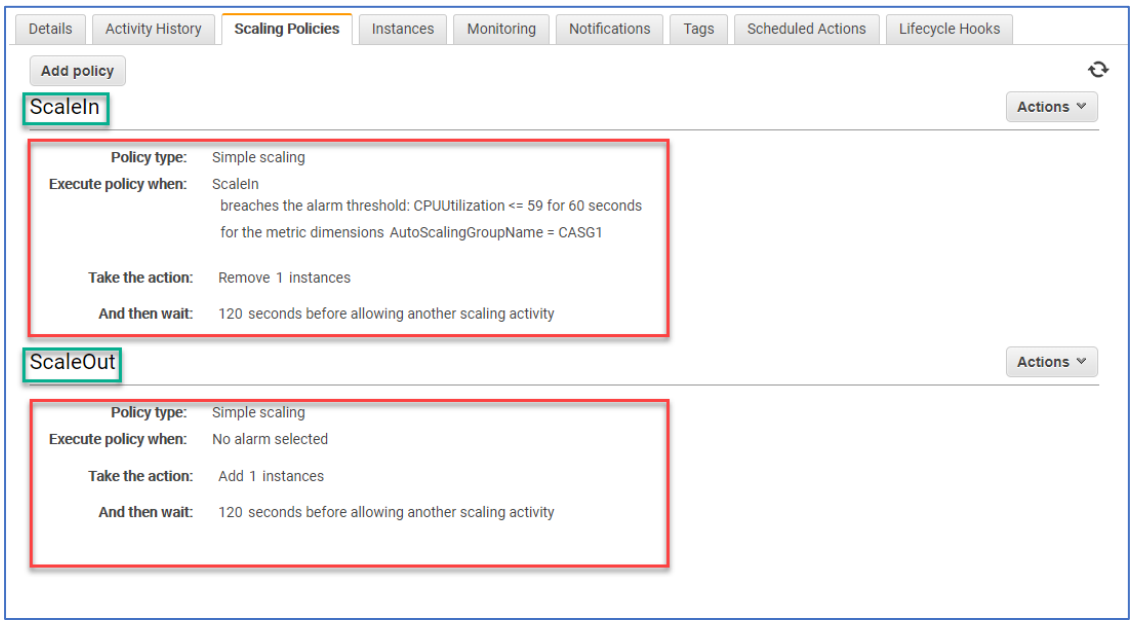


Creating simple scaling In policy for average below the 60% (Remove the new Instance automatically)



Alarm Settings: For creating a simple scaling policy

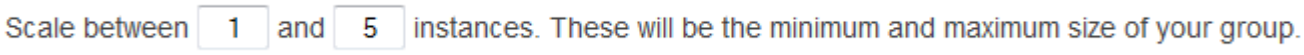




1. On the **Configure scaling policies** page, do the following:

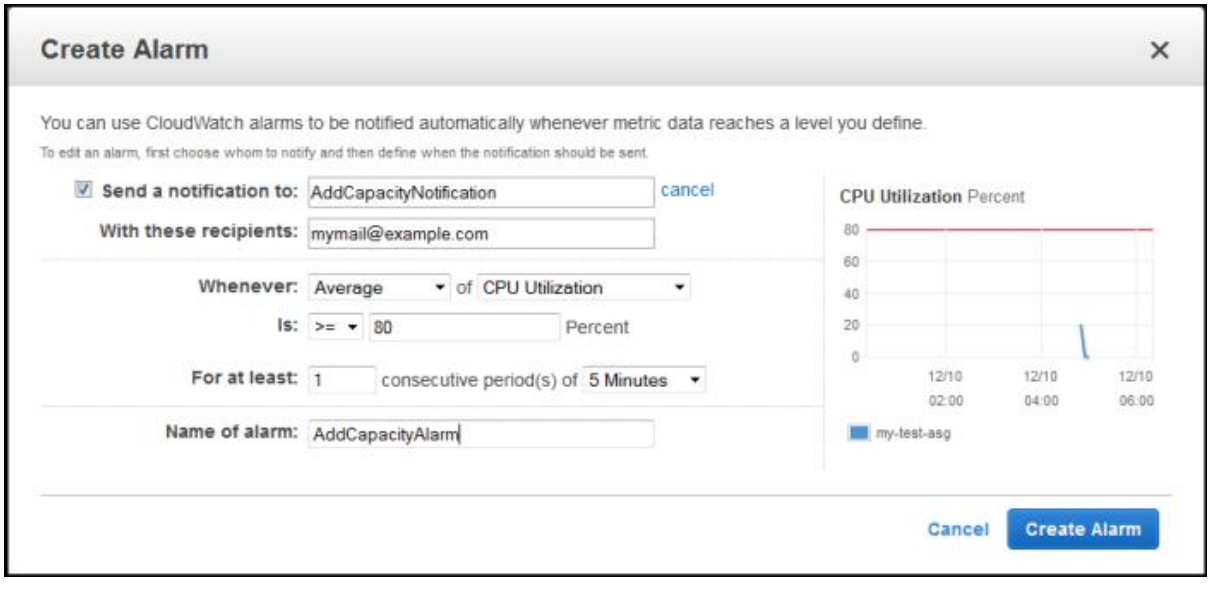
a. Select **Use scaling policies to adjust the capacity of this group**.

b. Specify the minimum and maximum size for your Auto Scaling group using the row that begins with **Scale between**. For example, if your group is already at its maximum size, you need to specify a new maximum in order to scale out.



c. Specify your scale-out policy under **Increase Group Size**. You can optionally specify a name for the policy, then choose **Add new alarm**.

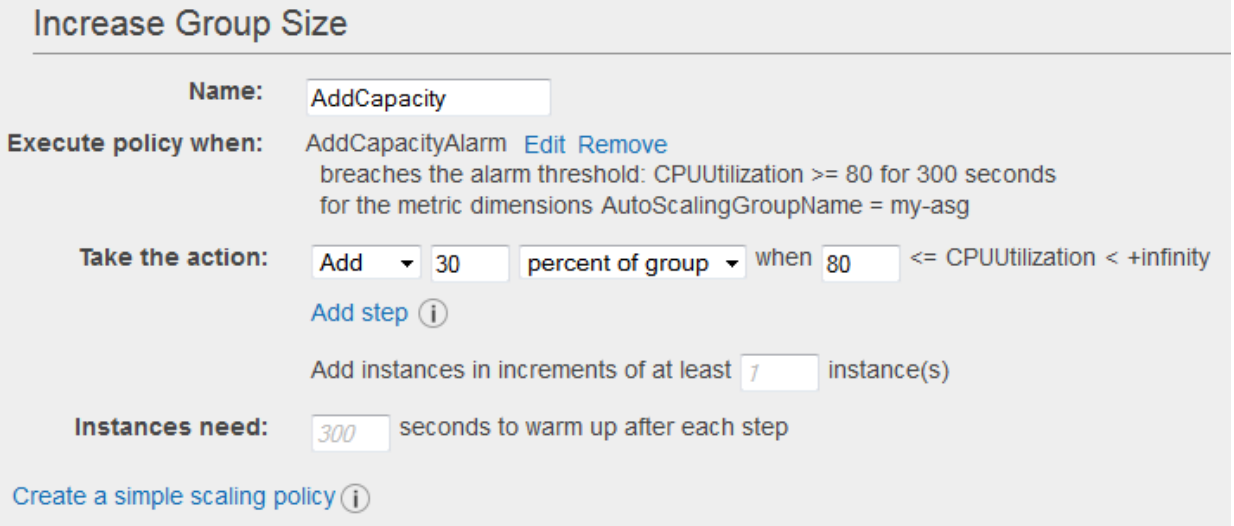
d. On the **Create Alarm** page, choose **create topic**. For **Send a notification to**, type a name for the SNS topic. For **With these recipients**, type one or more email addresses to receive notification. You can replace the default name for your alarm with a custom name. Next, specify the metric and the criteria for the policy. For example, you can leave the default settings for **Whenever** (Average of CPU Utilization). For **Is**, choose `>=` and type `80` percent. For **For at least**, type `1` consecutive period of `5 Minutes`. Choose **Create Alarm**.



e. For **Take the action**, choose `Add`, type `30` in the next field, and then choose `percent of group`. By default, the lower bound for this step adjustment is the alarm threshold and the upper bound is null (positive infinity).

To add another step adjustment, choose **Add step**. To set a minimum number of instances to scale, update the number field in **Add instances in increments of at least 1 instance(s)**.

(Optional) We recommend that you use the default to create scaling policies with steps. To create simple scaling policies, choose **Create a simple scaling policy**. For more information, see Simple and Step Scaling Policies for Amazon EC2 Auto Scaling.



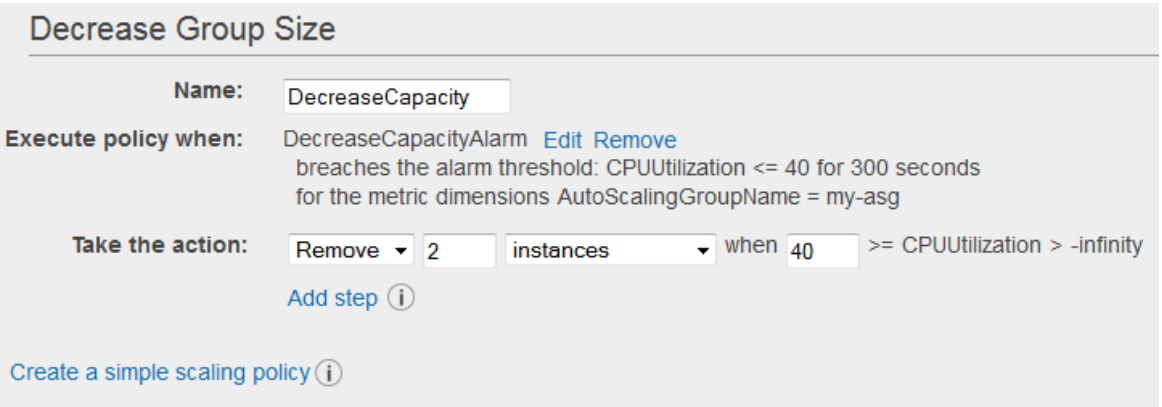
f. Specify an instance warm-up value for **Instances need**, which allows you to control the amount of time until a newly launched instance can contribute to the CloudWatch metrics.

g. Specify your scale-in policy under **Decrease Group Size**. You can optionally specify a name for the policy, then choose **Add new alarm**.

h. On the **Create Alarm** page, you can select the same notification that you created for the scale-out policy or create a new one for the scale-in policy. You can replace the default name for your alarm with a custom name. Keep the default settings for **Whenever** (Average of CPU Utilization). For **Is**, choose `<=` and type `40` percent. For **For at least**, type `1` consecutive period of `5 Minutes`. Choose **Create Alarm**.

i. For **Take the action**, choose `Remove`, type `2` in the next field, and then choose `instances`. By default, the upper bound for this step adjustment is the alarm threshold and the lower bound is null (negative infinity). To add another step adjustment, choose **Add step**.

(Optional) We recommend that you use the default to create scaling policies with steps. To create simple scaling policies, choose **Create a simple scaling policy**. For more information, see Scaling Policy Types.



j. Choose **Review**.

k. On the **Review** page, choose **Create Auto Scaling group**.

2. Use the following steps to verify the scaling policies for your Auto Scaling group.

a. The **Auto Scaling Group creation status** page confirms that your Auto Scaling group was successfully created. Choose **View your Auto Scaling Groups**.
b. On the **Auto Scaling Groups** page, select the Auto Scaling group that you just created.
c. On the **Activity History** tab, the **Status** column shows whether your Auto Scaling group has successfully launched instances.
d. On the **Instances** tab, the **Lifecycle** column contains the state of your instances. It takes a short time for an instance to launch. After the instance starts, its lifecycle state changes to `InService`.

   The **Health Status** column shows the result of the EC2 instance health check on your instance.
e. On the **Scaling Policies** tab, you can see the policies that you created for the Auto Scaling group.