POC – EC2 Instance Using Lambda

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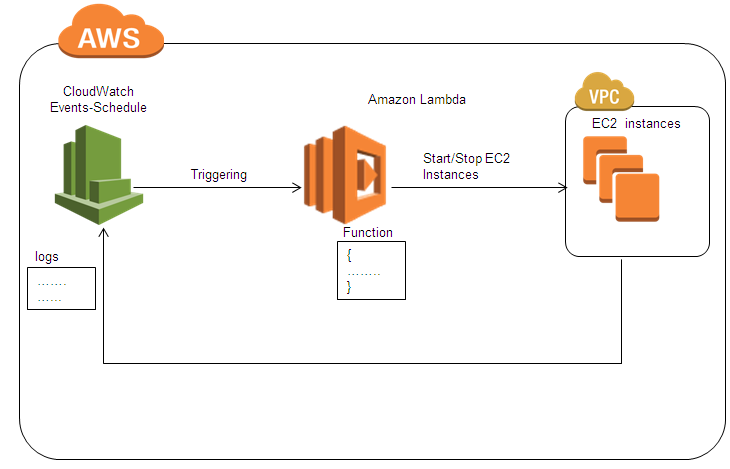
**Revision History**

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| Sukhbir K Bhavra | Technical Architect | 18/01/2017 |
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# Introduction

This document describes the process to start and stop EC2 instance at particular time using AWS lambda and CloudWatch



We are creating a CloudWatch Events-Schedule which will trigger the lambda function to start/stop the EC2 instances at desired instant of time

# Objective

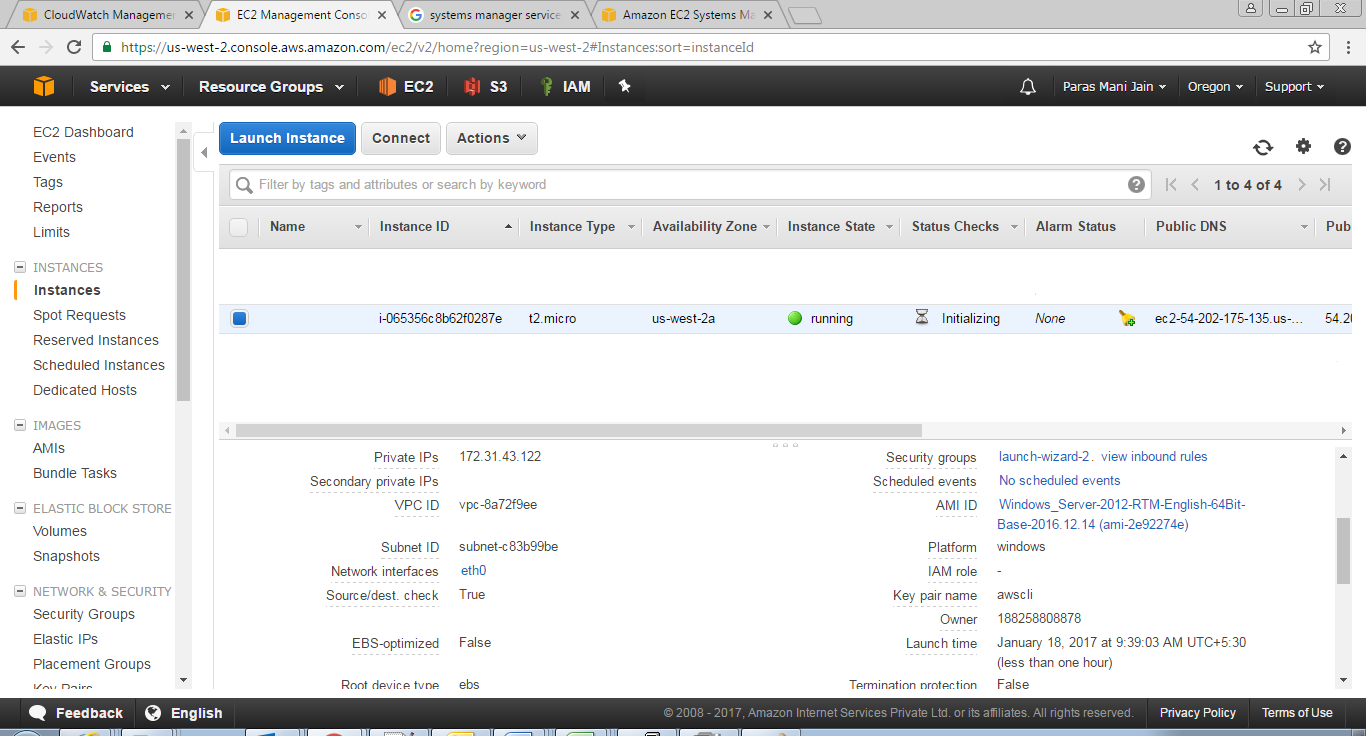
Understand the process to start and stop EC2 instance at particular time using AWS lambda and CloudWatch

# Pre-requisite

* AWS account, IAM user access, CloudWatch, AWS Lambda

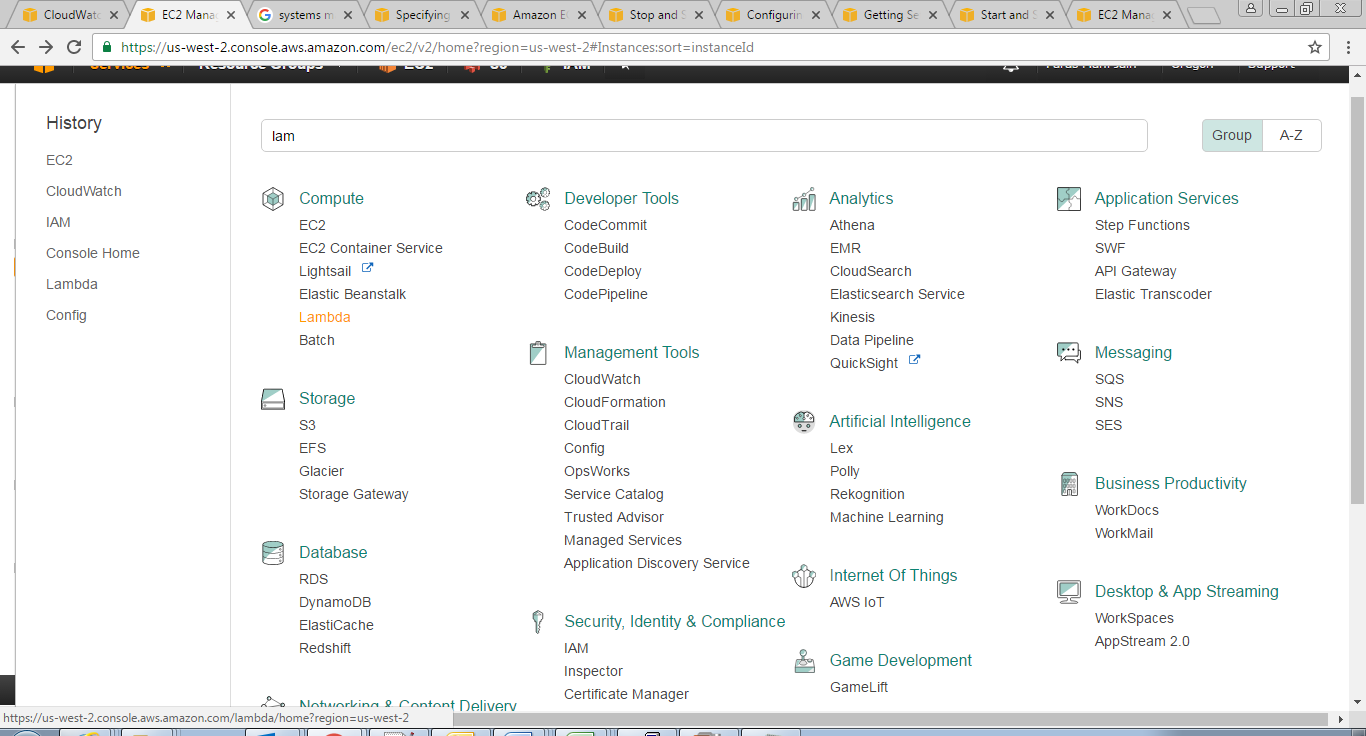
# Procedure

1. The following instance is in running state, we have to stop this instance using cloudwatch and AWS lambda at particular instant of time

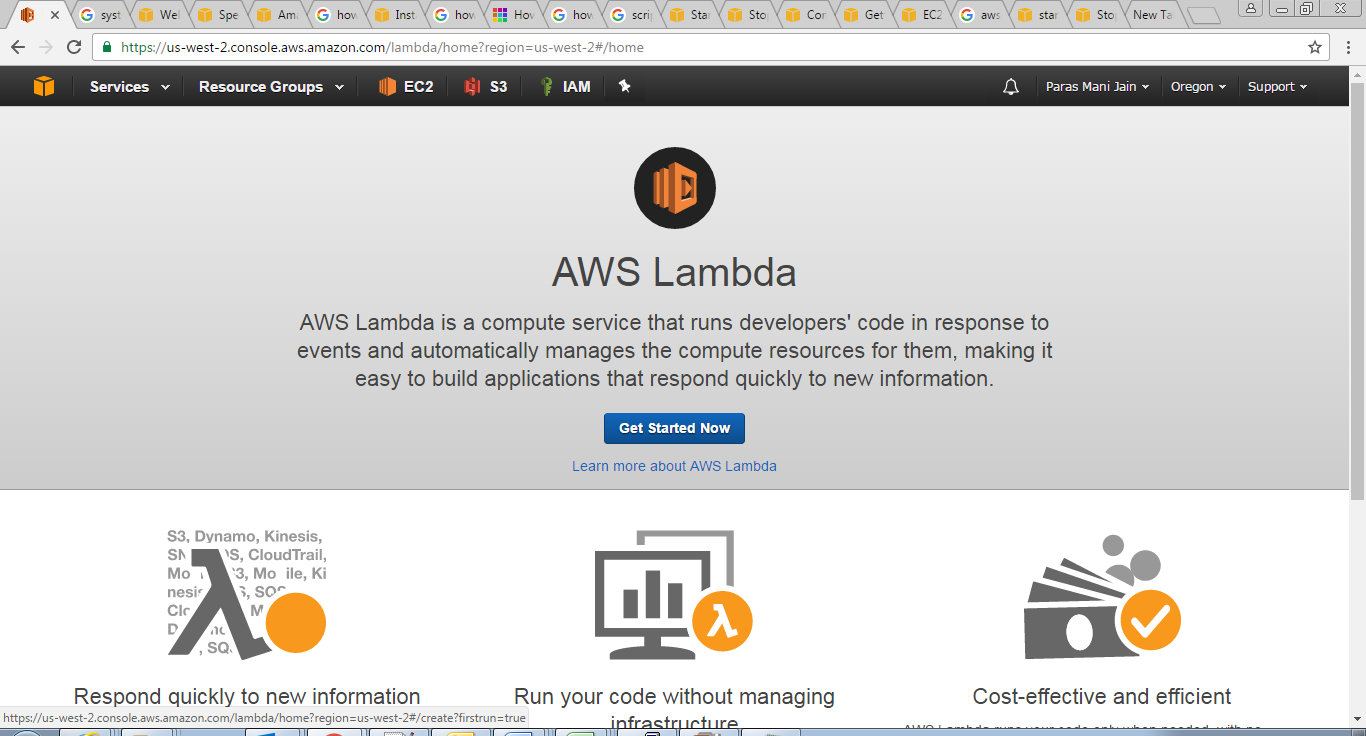


## Create a AWS Lambda Function

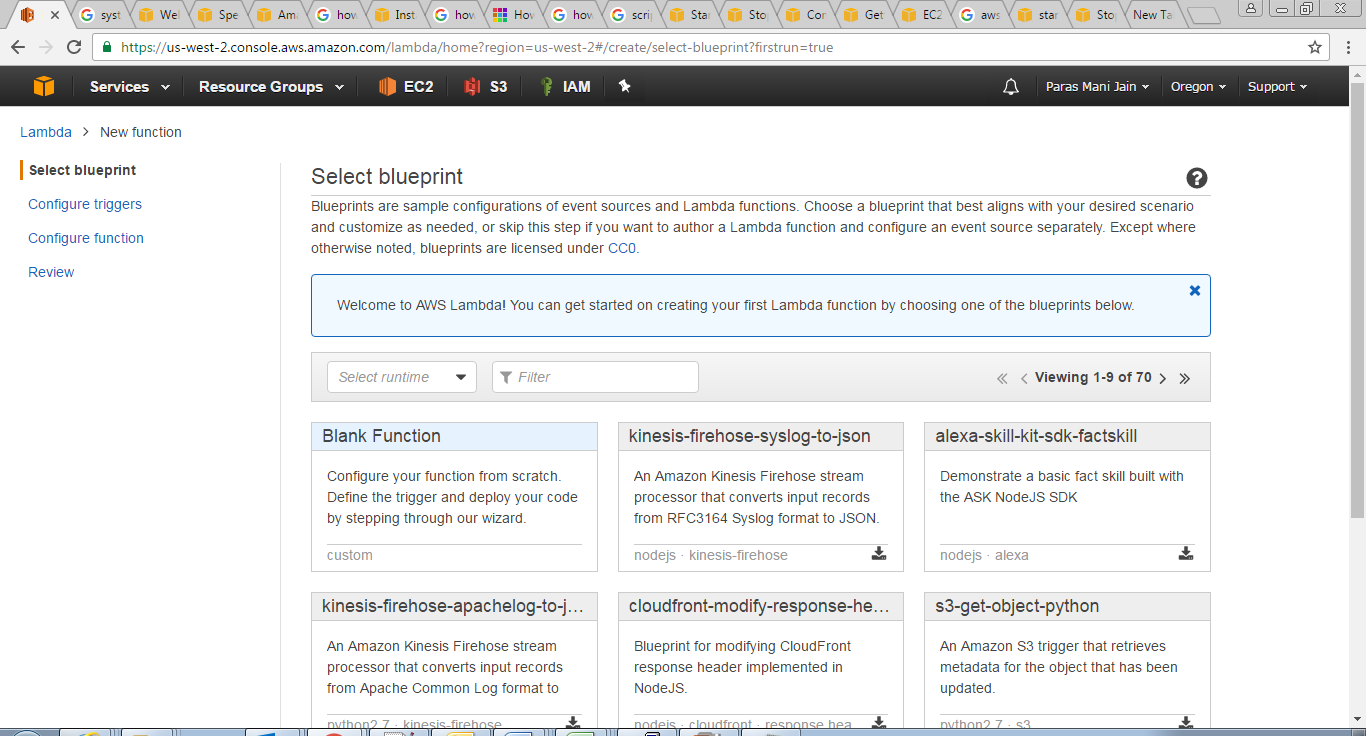
1. Open the AWS Management console
2. Click on **Lambda** under **Services**.



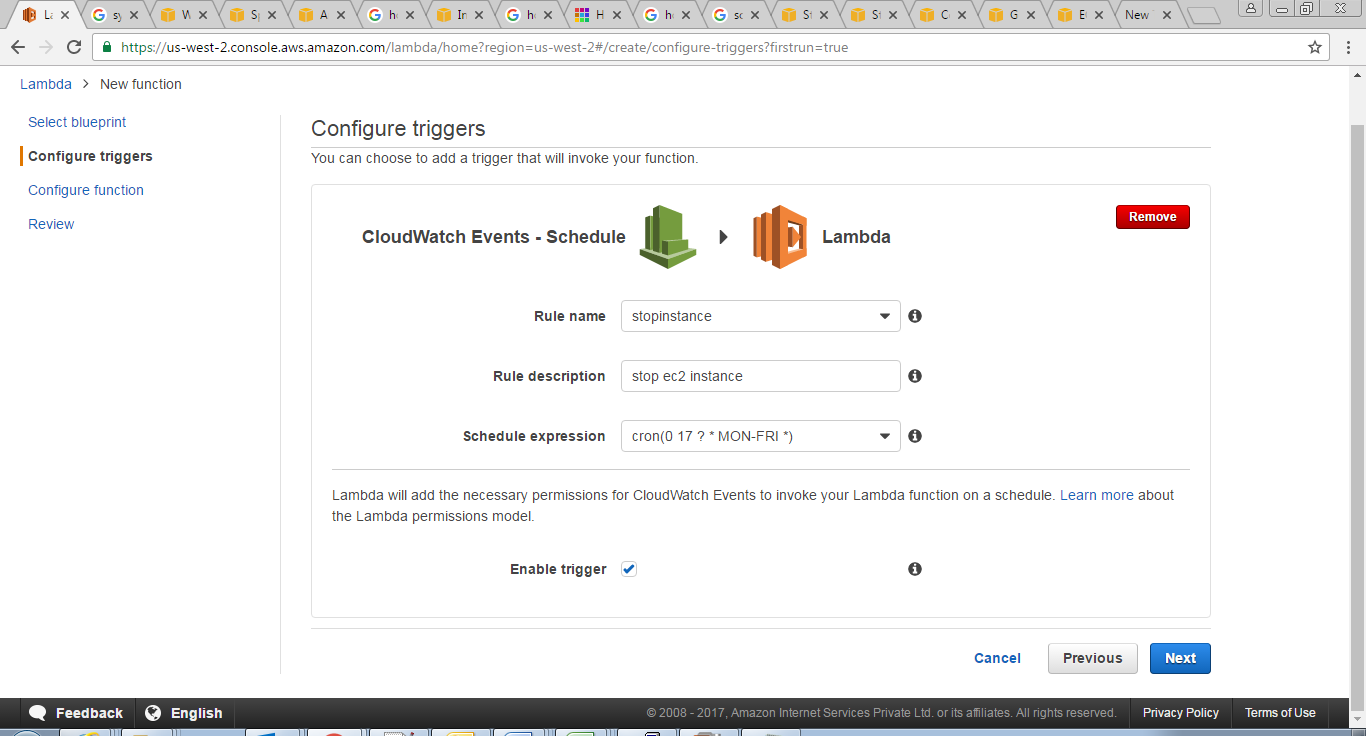
1. From **AWS lambda** console, click on **Get Started Now** button.



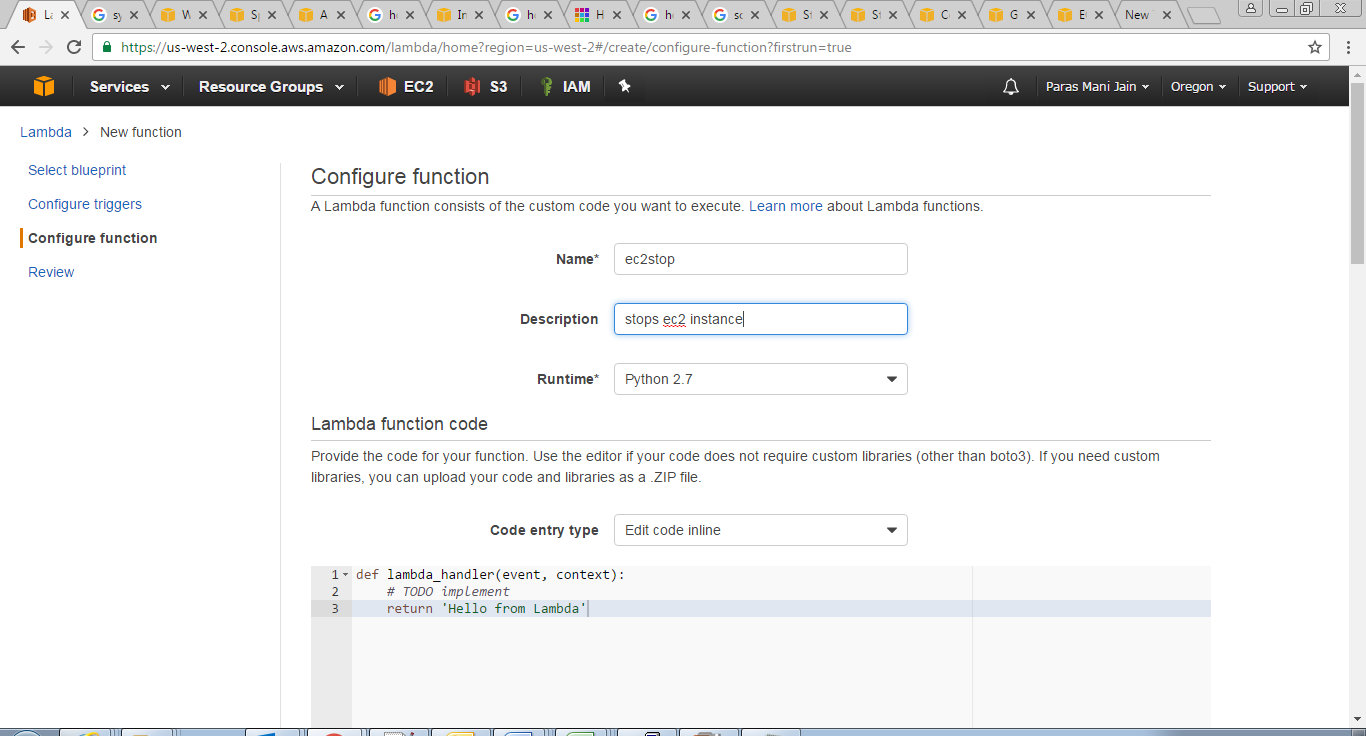
1. Under **Select buleprint** tab, Select on **Blank Funtcion**



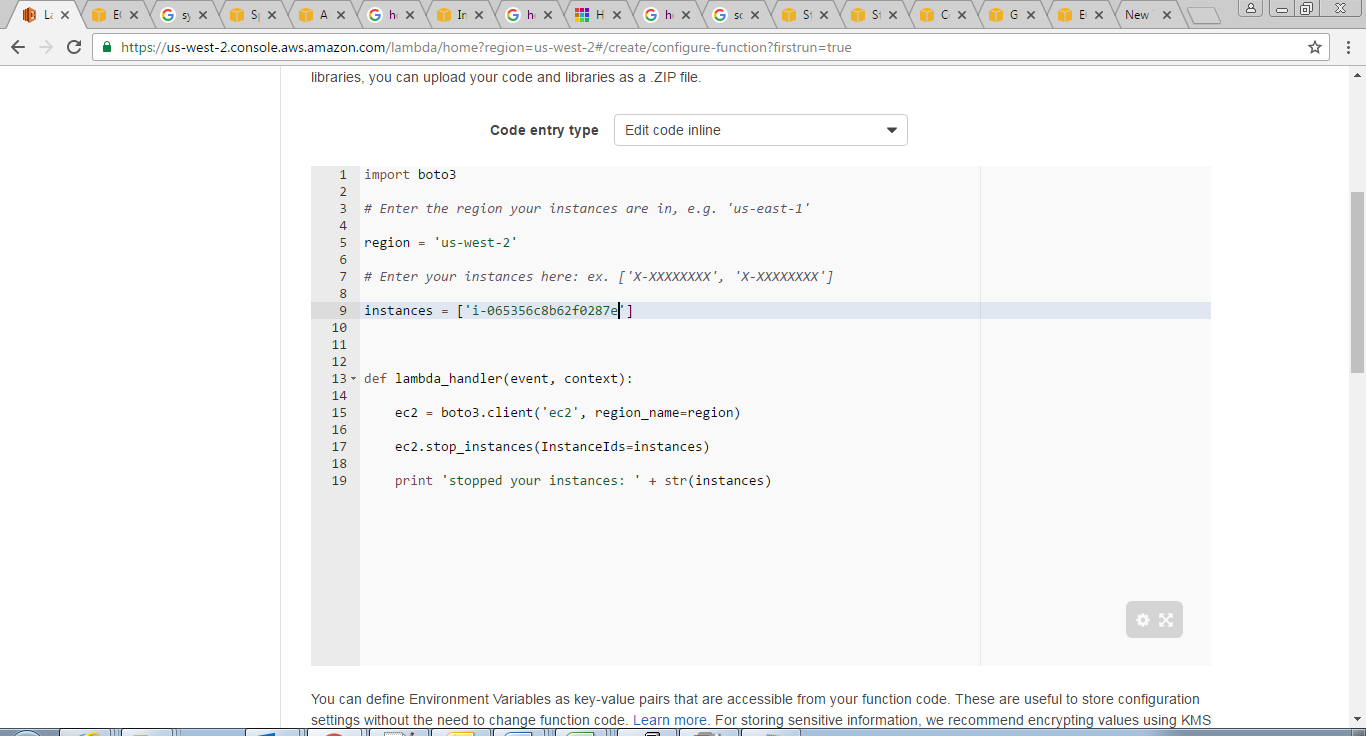
1. Choose **CloudWatch Events –Schedule,** provide the **Rule Name,** **Rule description**, select **cron** in **Schedule expression** and set **enable trigger** on **.** Click on **NEXT** button



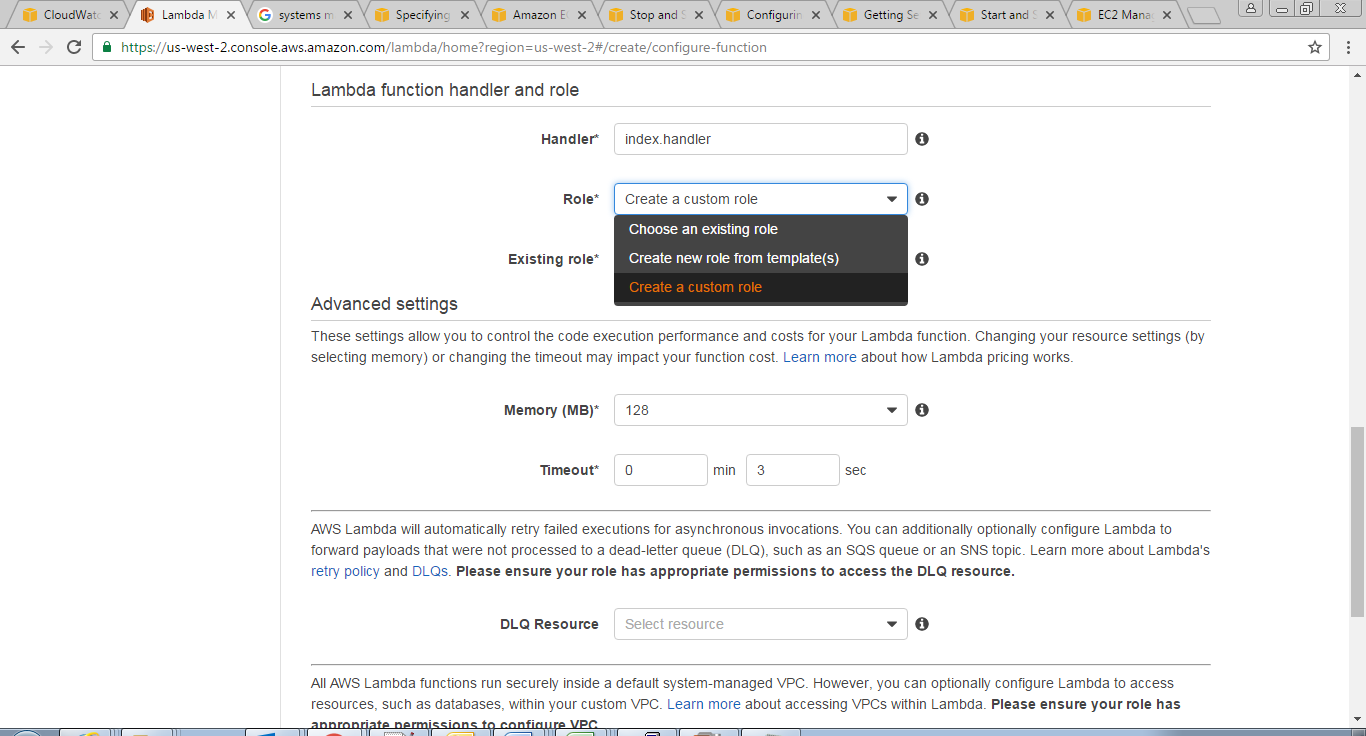
1. You will redirected to the following page,Under the **Configure Function tab,** provide the **Name, Description,** in **Runtime** choose **Python 2.7**



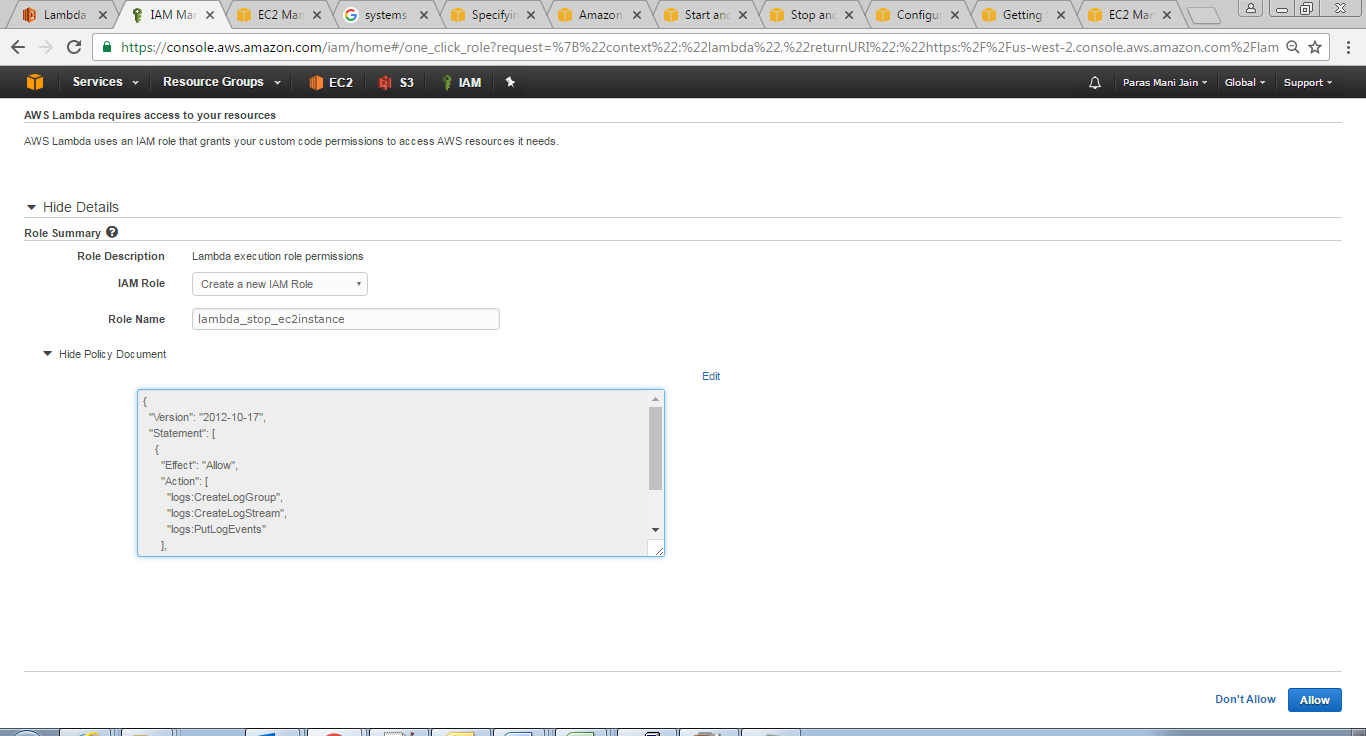
1. Enter the following in the sample code



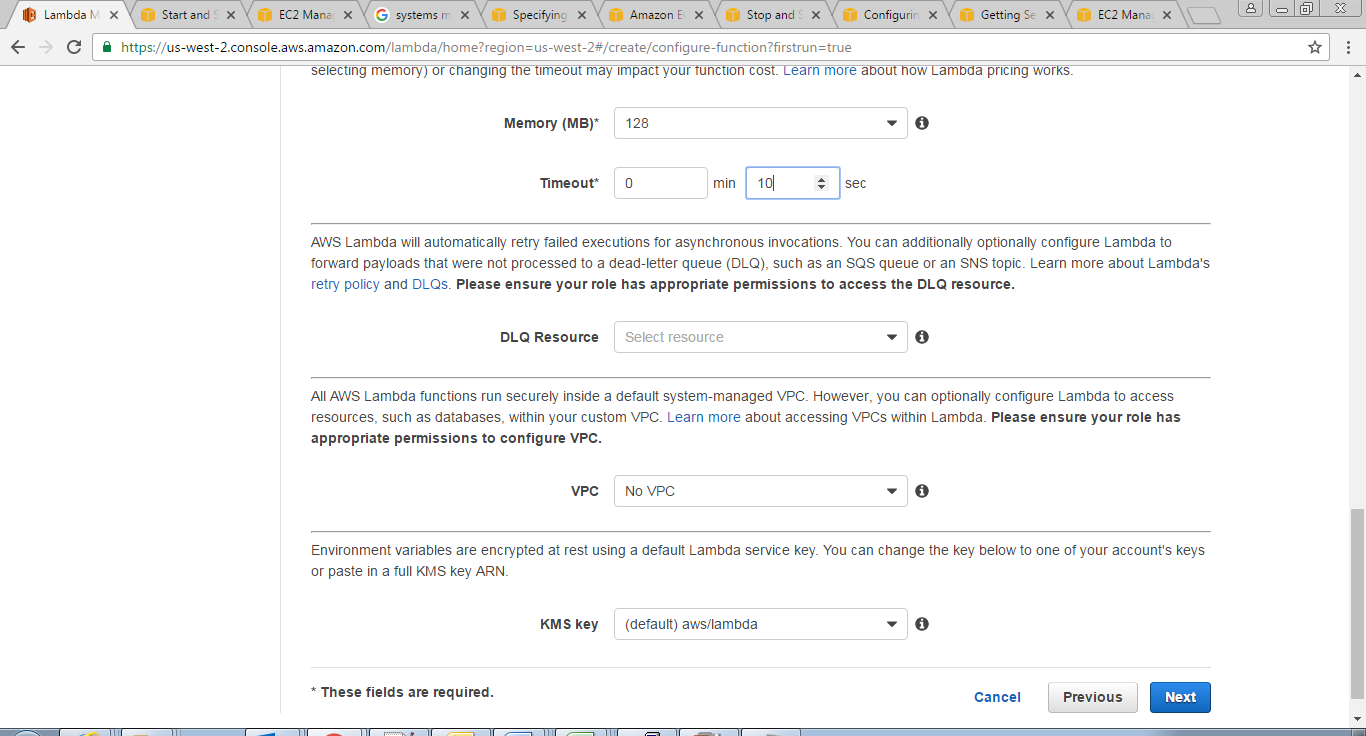
1. Under **Lambda Function Handler and role** tab**,** in **Role** choose **Create a** **custom role** you will be redirected to the following page as shown in step 10



1. Under **Role Summary** tab, in **IAM** role select **create a new IAM Role;** in **Role Name** provide the name. Choose **View Policy Document**, **Edit**, and then edit the policy as follows

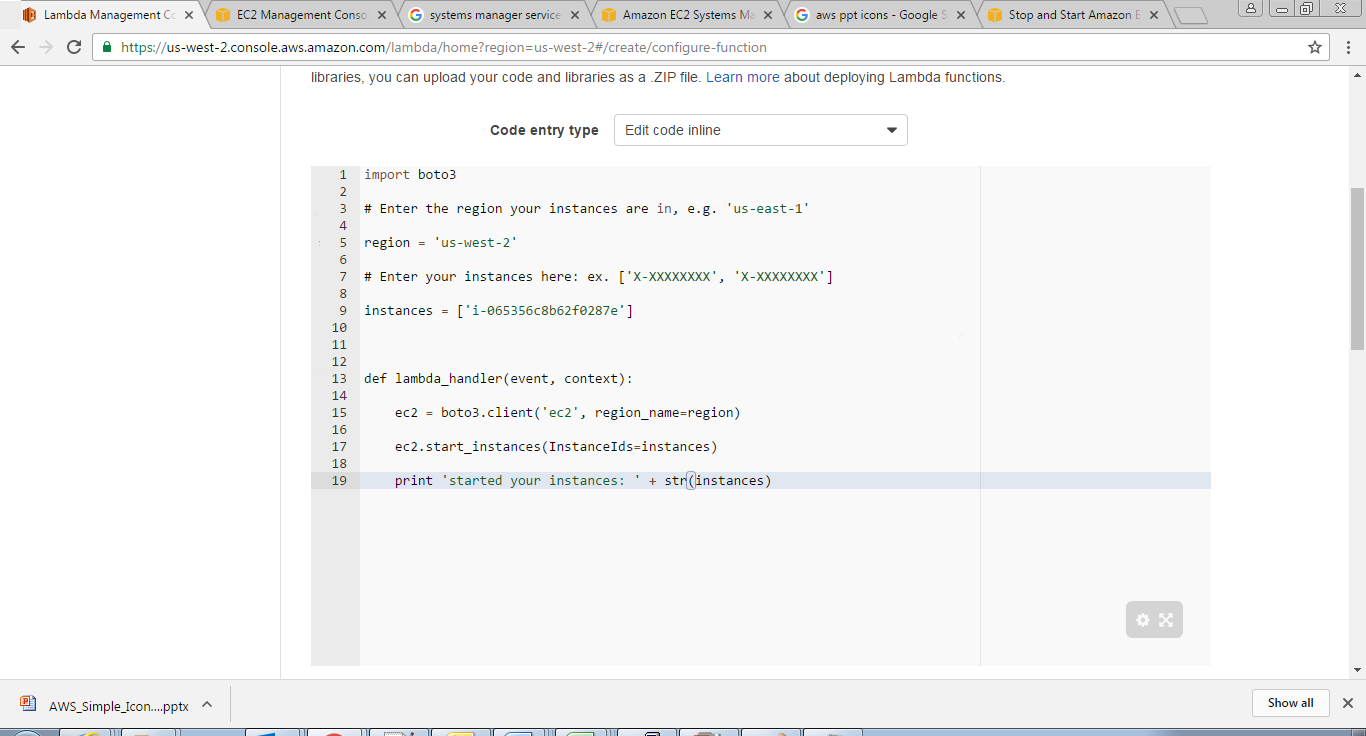


1. Click on **Allow** button. You will redirected to AWS lambda page as shown in step 12
2. In **Advanced settings**, give 0 min 10 seconds in **Timeout**
3. Choose **Next** to review your function configuration, and then click on **Create function** button



1. Repeat steps 2-8 and 12 to create another function that will start your instances again, using the following code

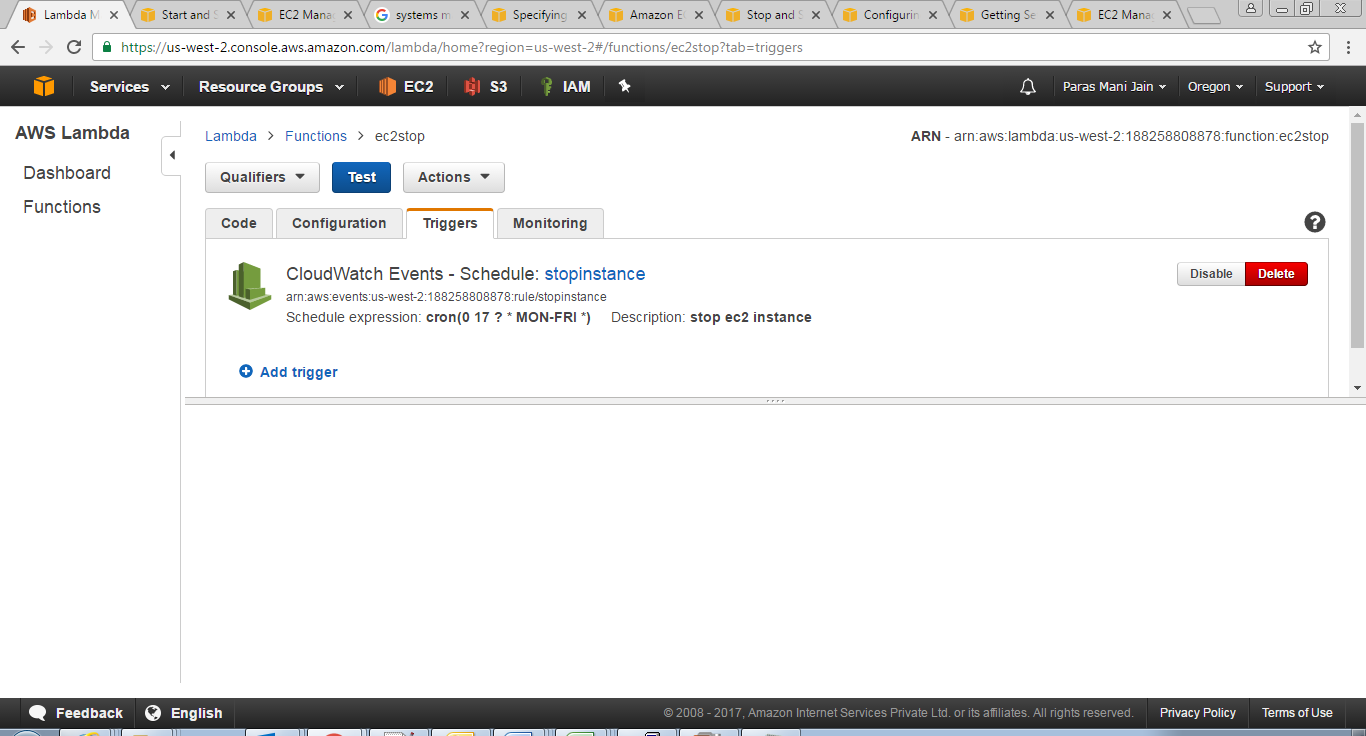




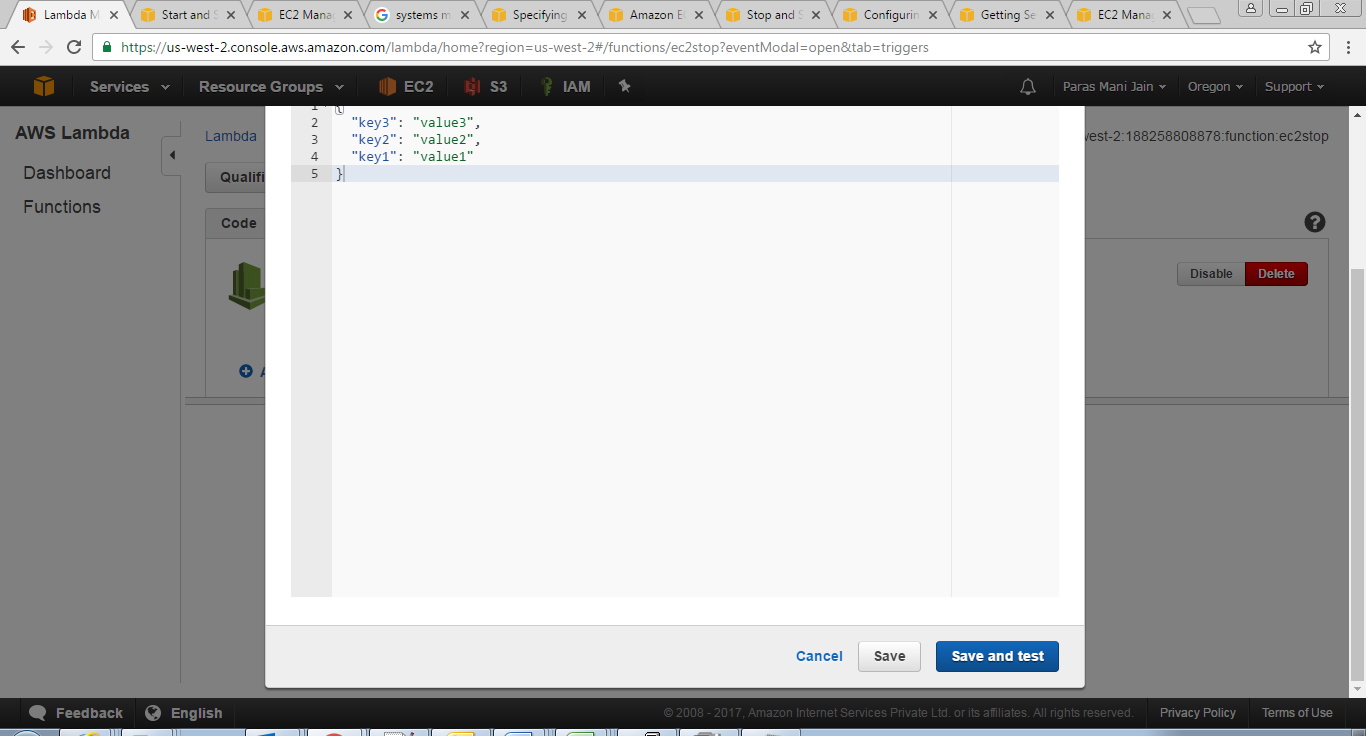
**Note:** You can use the previously created IAMRole (steps 9-11) for the function that will start your instance.

## Test your newly created functions

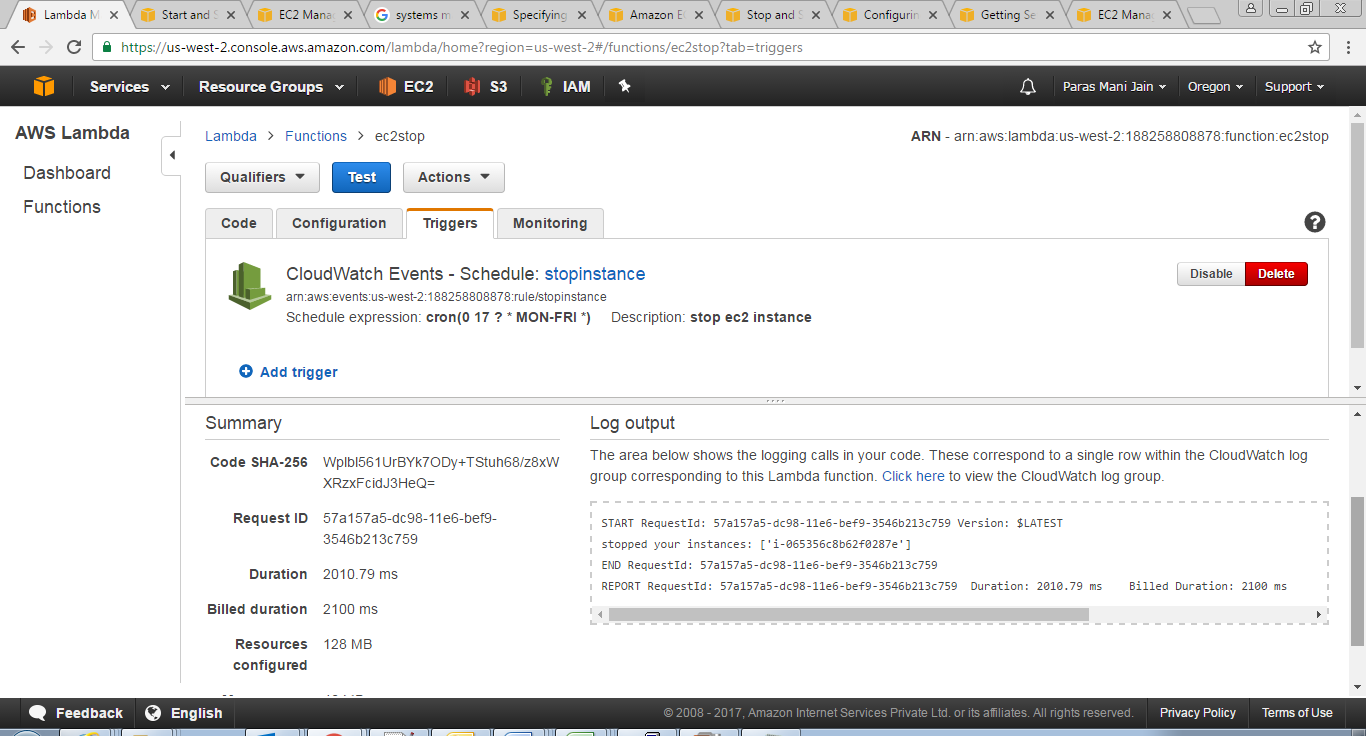
1. Now you can see the newly created function on **aws lambda dashboard.** Click on **Test**



1. A popup window will open as shown below, click on **Save and Test**

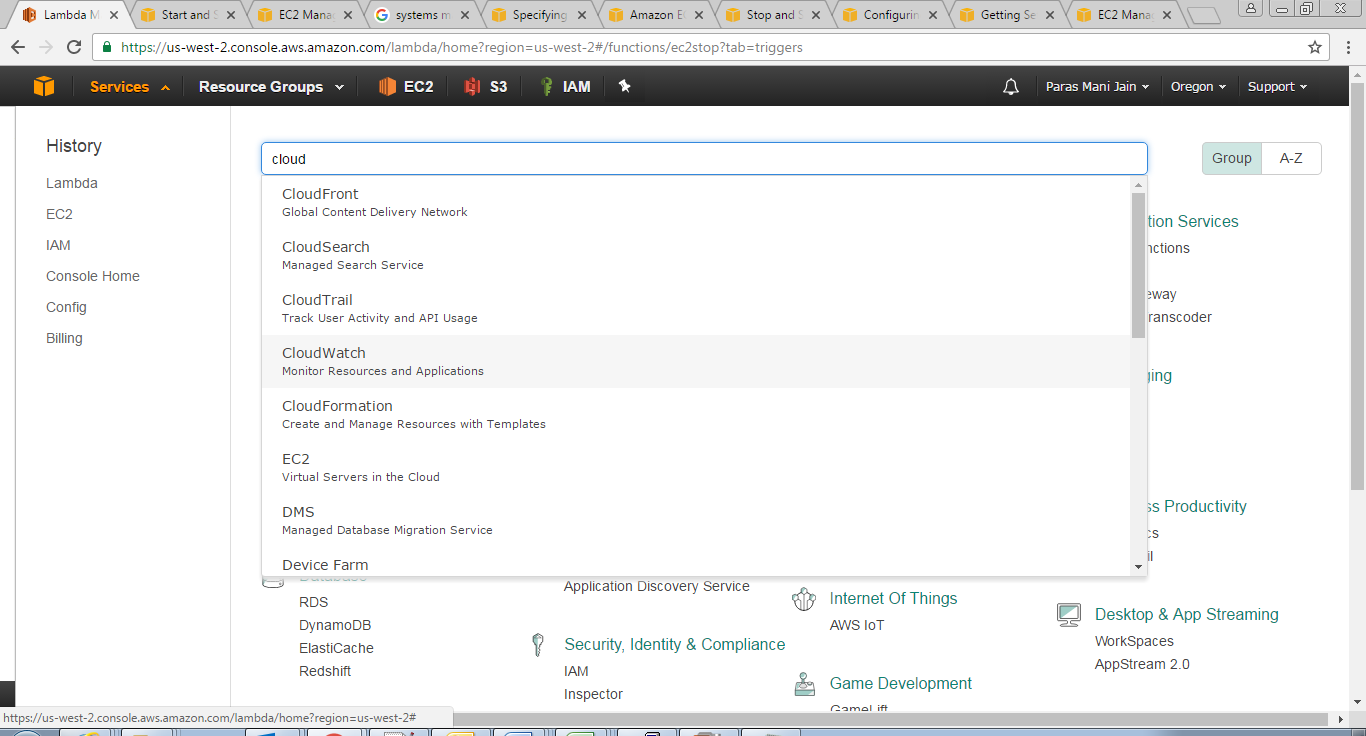


1. You will see the following screen.

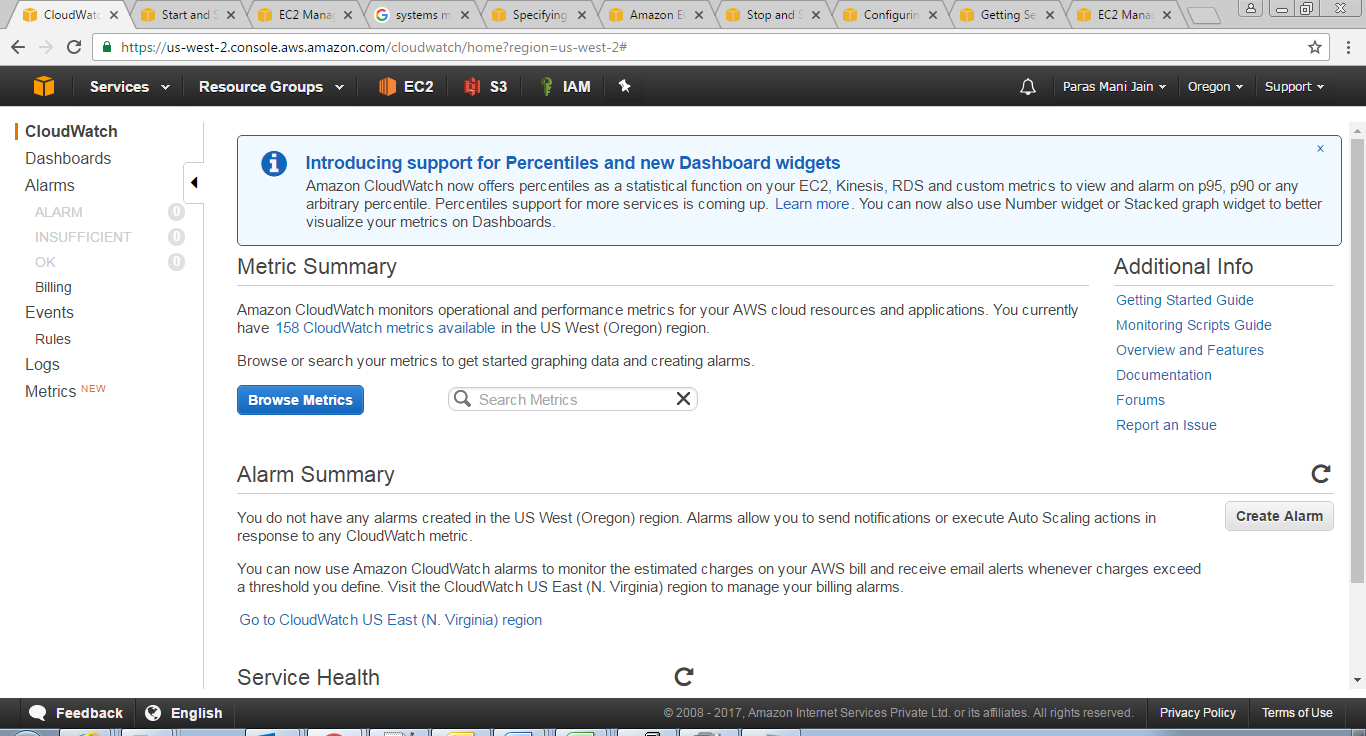


## Create a CloudWatch Event-Schedule to trigger Lambda function

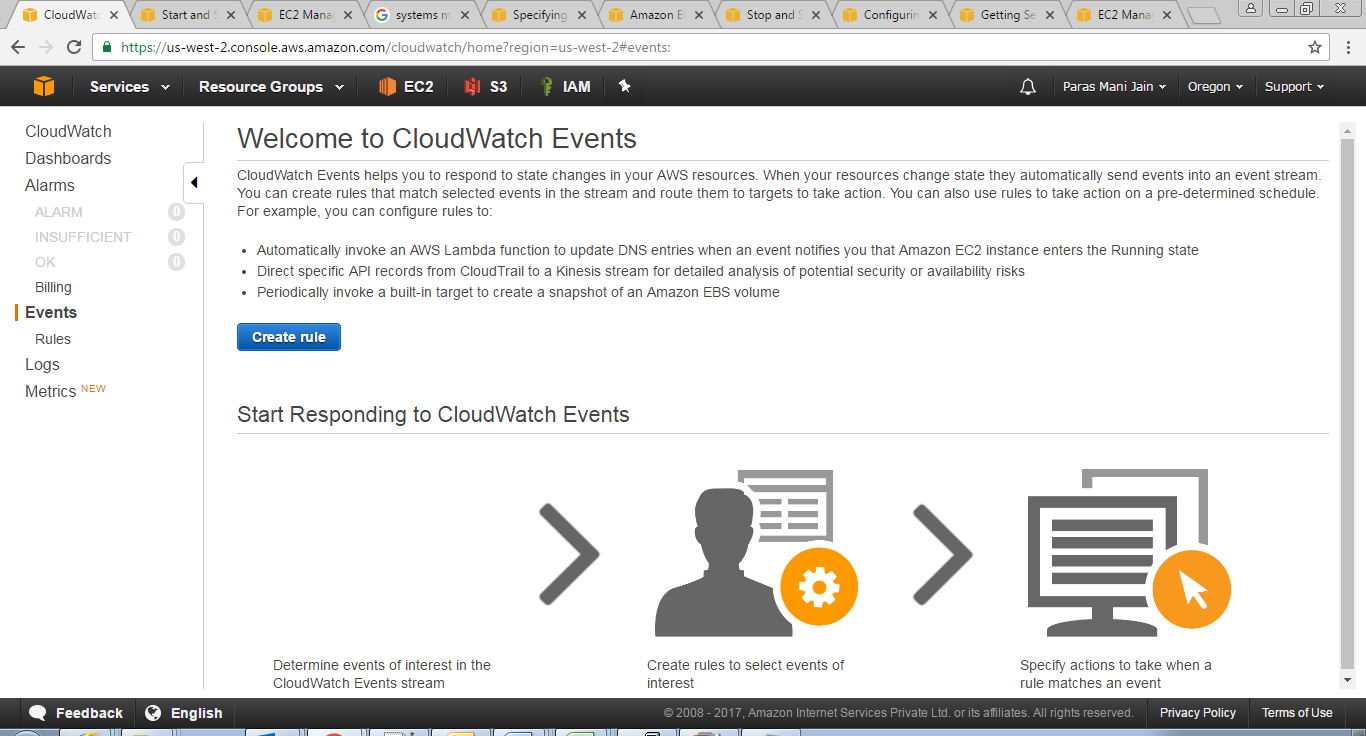
1. Click on **CloudWatch** under **Services,** you will be redirected to the following page as shown in step 19



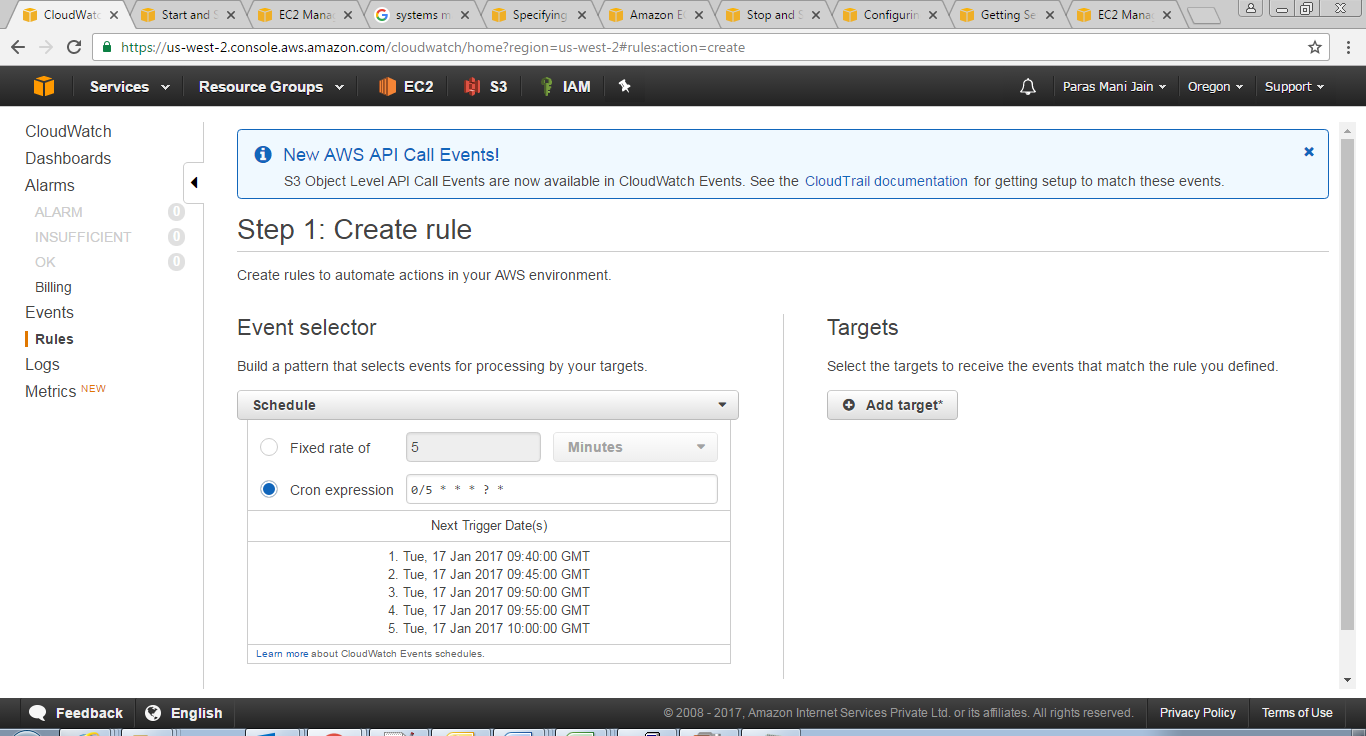
1. Click on **Events** from the Left panel.



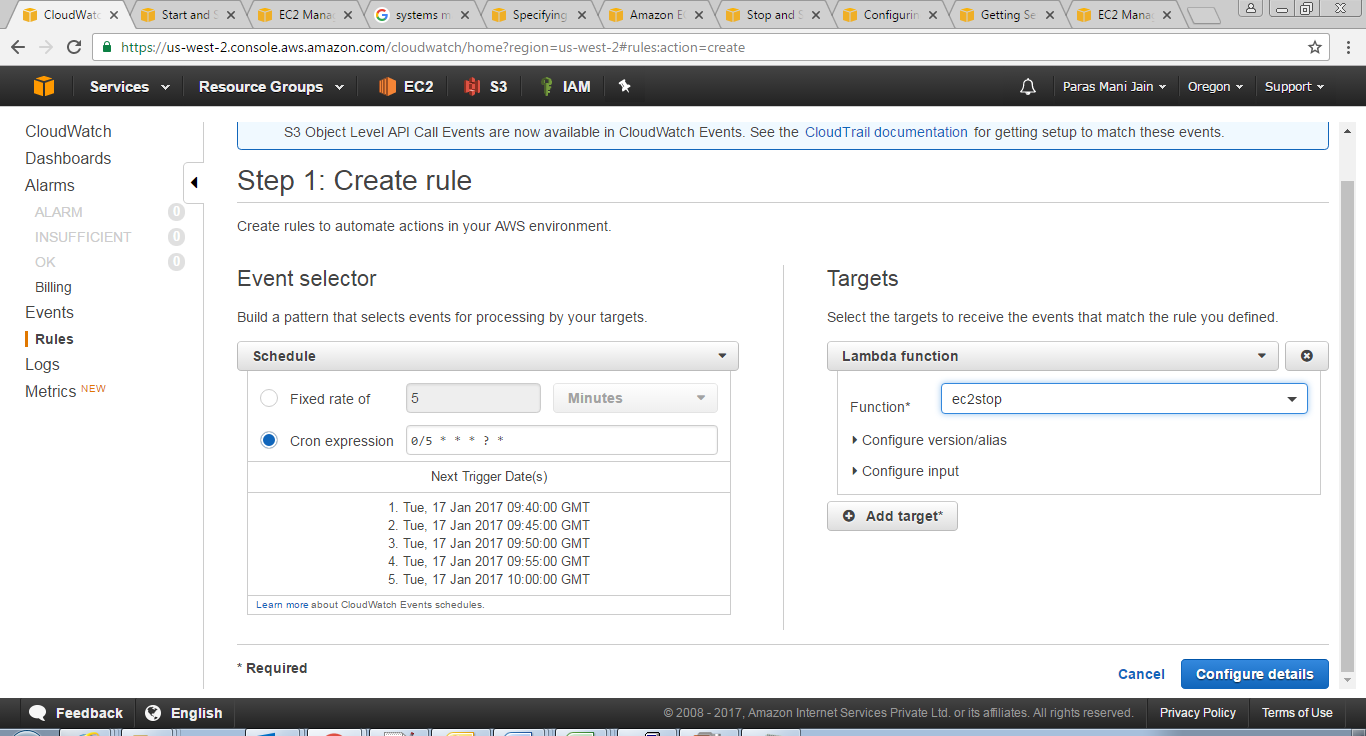
1. Click on **Create rule**



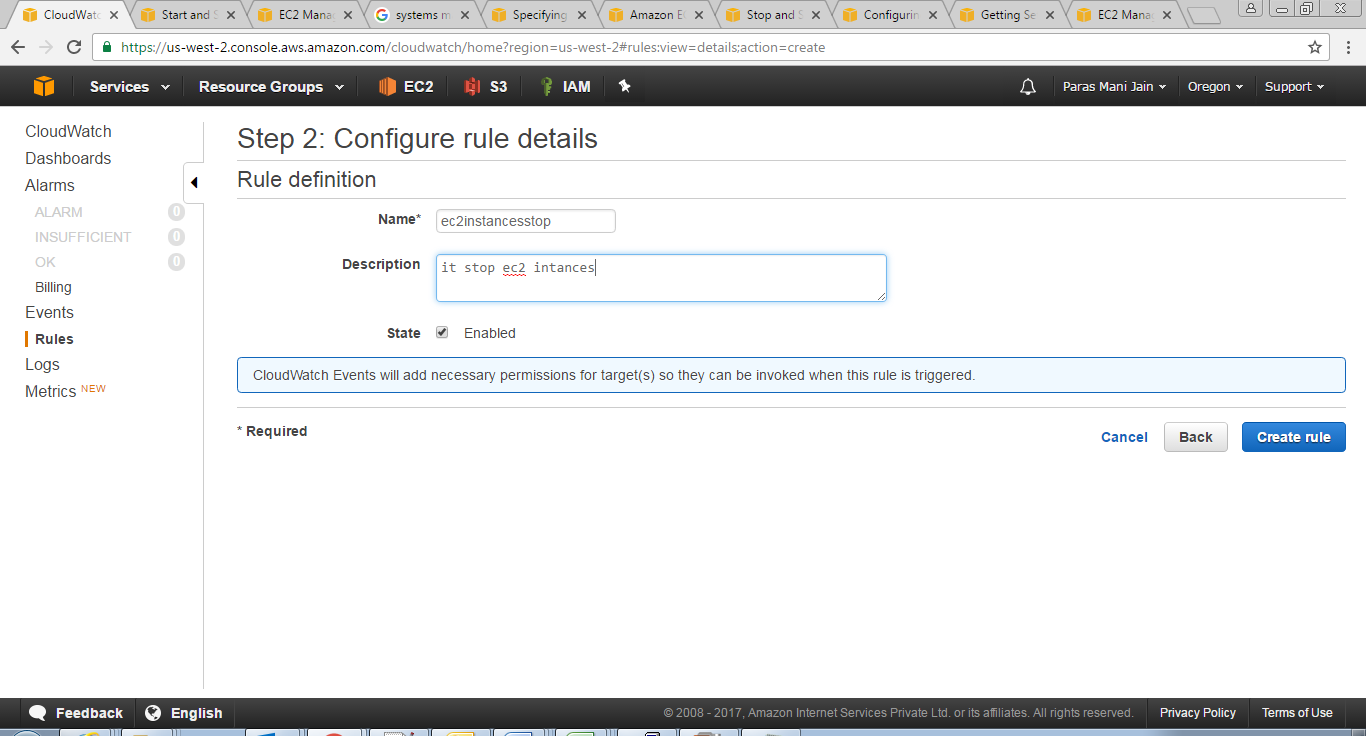
1. Select **Schedule** under **Event Selector,** select **Cron expression** radio button and give the desired cron expression depending at what time you want to stop/start the instance.
2. Click on **Add target** button under **Target** tab



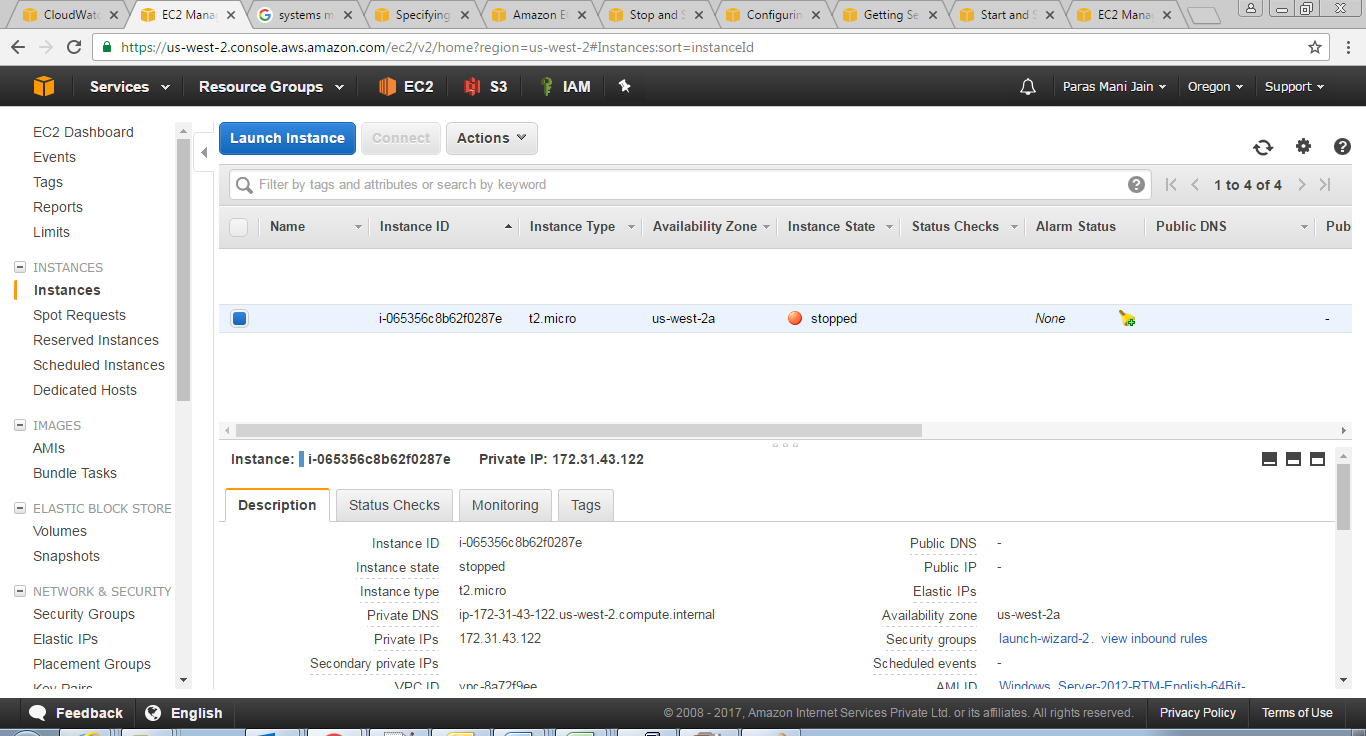
1. Choose your lambda function , click on **configure details** button



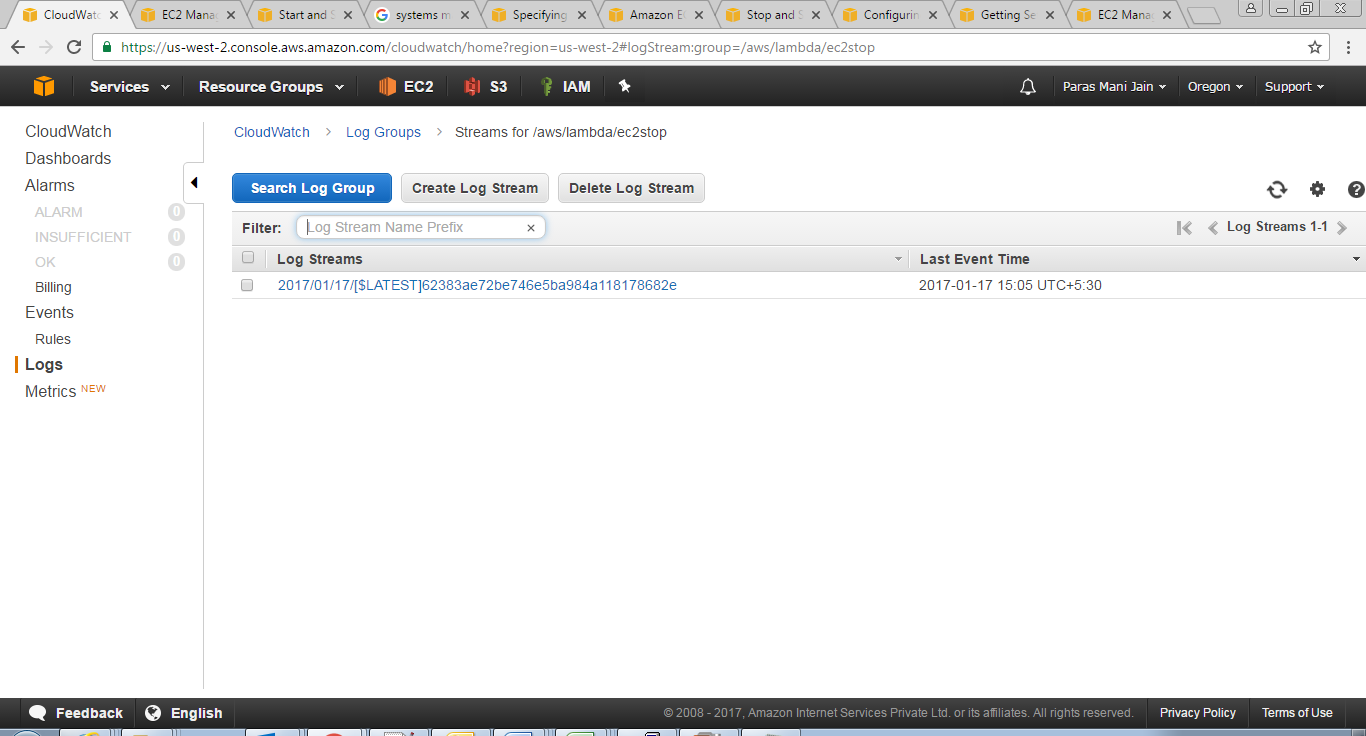
1. Provide the **Name, Description** set **State enabled** on**.**  Click on **Create Rule** button

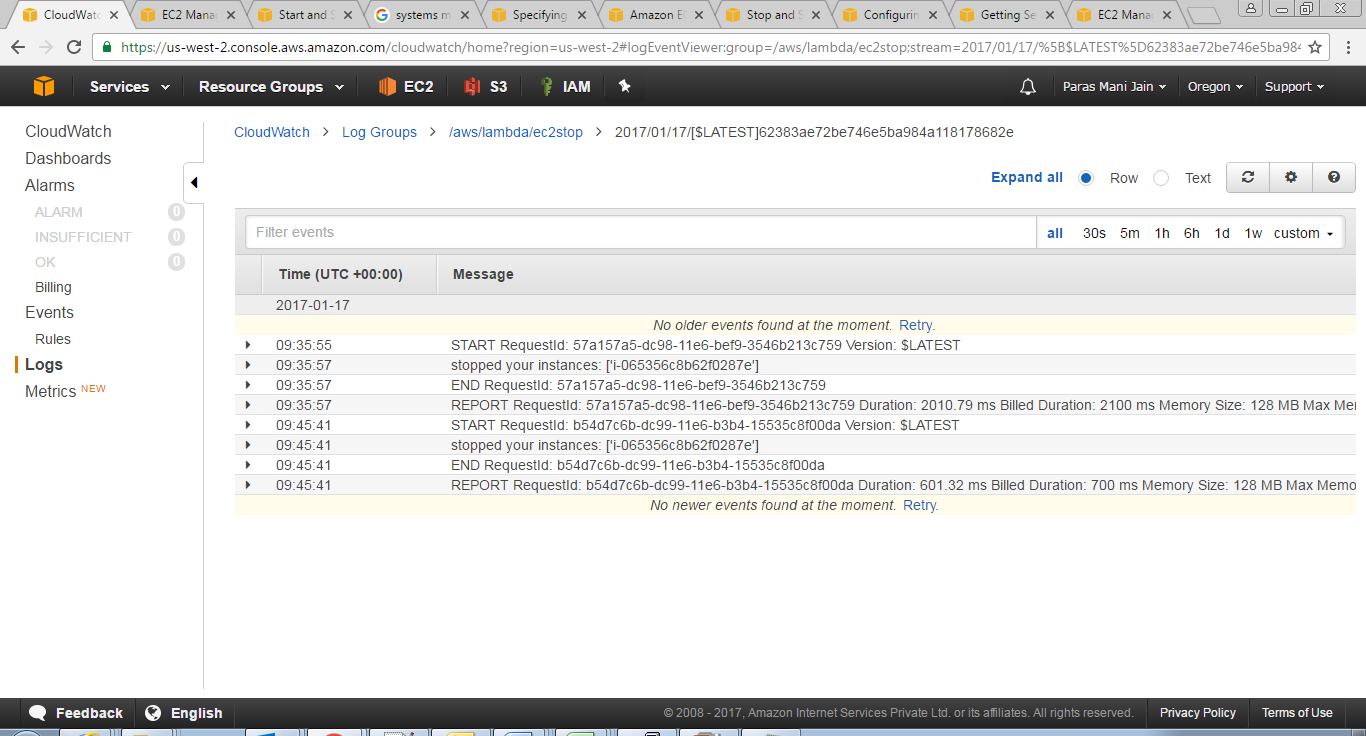


1. In **EC2 dashboard** you will observe that the instance is stopped



1. To view logs go to **CloudWatch Dashboard** and click on **Logs** from the left panel. Click on the logs under logstreams to view its detail





# References

http://docs.aws.amazon.com/