AWS Lab 32

CloudWatch Alarm & Simple Notification Service

Overview of the lab

In this lab you will learn how to create a cloudwatch alarm that integrates to simple notification service to trigger email notifications

SNS Topic

It is a message channel

SNS Subscription

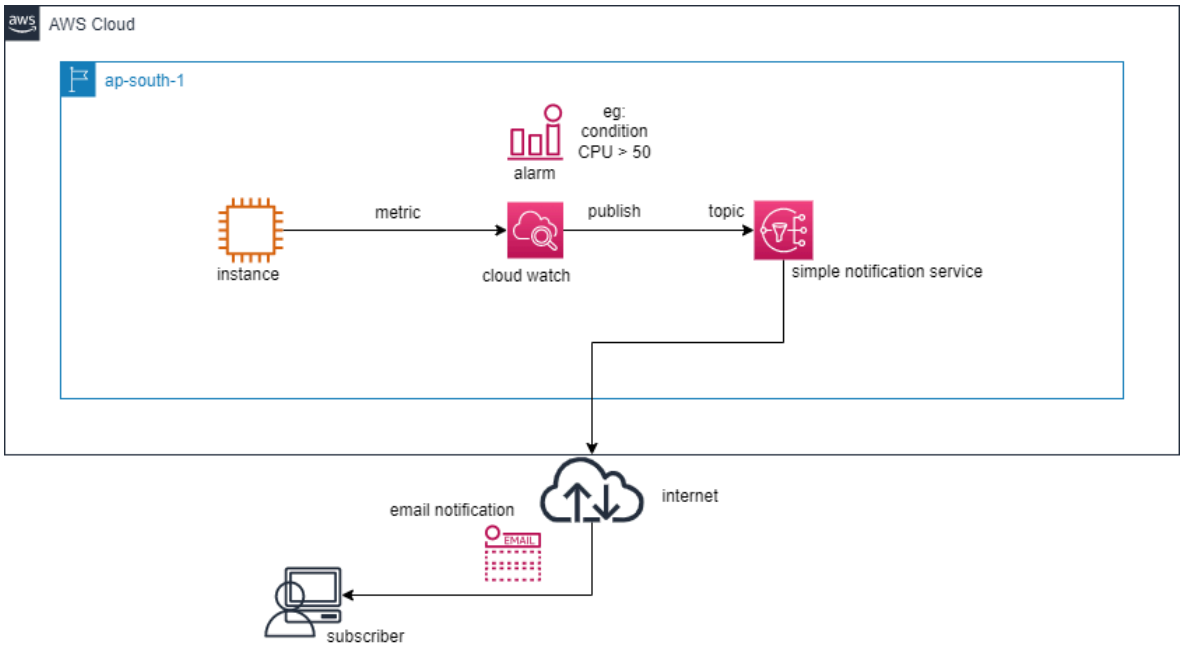
Person or Application who receives notification

- A-A (application to application) eg: lambda
- A-P (application to person) eg: email

CloudWatch Alarm

It is a threshold set on specific metric

Architecture



Step by Step Lab

Launch instance

1. In EC2 management console, launch instance
   - 1.1. Name and tag – linux-server
   - 1.2. Application and OS Images – Amazon Linux
   - 1.3. Instance type - t2.micro
   - 1.4. Key pair – select the existing keypair
   - 1.5. Edit Network settings
     a. Subnet – subnet in ap-south-1a (even no preference is fine)
     b. Firewall – select existing security group

2. Number of instances - 1 (Leave all other settings as default and launch instance)

CloudWatch monitoring

3. Open CloudWatch Management Console in a new browser window
4. Click on Metrics and All metrics
5. Click on EC2 and Per-Instance-Metrics
6. Search with your instance id
7. Select the CPUUtilization Metric (see the graph for every 5 mins)

Create SNS Topic

8. In SNS - Create topic
    8.1. Topic name - demo-topic
9. Click on Next step
    9.1. Type - Standard
10. Click on Create topic

Create SNS Subscription & Confirm Subscription

11. Click on Create subscription
    11.1. Protocol - Email
    11.2. Endpoint - youremail@gmail.com

12. Click on Create subscription

(Status will be Pending confirmation)

13. Login to your email account and confirm subscription
(Status will be Confirmed)

Create CloudWatch Alarm

14. In Cloudwatch console - Click on Alarms and All alarms
15. Click on Create alarm
16. Select metric
    16.1. Click on EC2
    16.2. Click on Per-Instance Metrics
    16.3. Search with instance-id
    16.4. Select CPUUtilization Metric
17. Click on Select metric
18. Conditions - Greater than 50
19. Click on Next
20. Select - demo-topic
21. Click on Next
22. Alarm name - demo-alarm
23. Click on Next
24. Click on Create alarm (wait for the state to to - OK)

Stress within Linux OS

25. Login to the instance via EC2 instance connect
26. Run Stress within OS

```
sudo yum install stress -y
sudo stress --cpu 2
```

CloudWatch monitoring & Email Alert

27. Select the CPUUtilization Metric, wait for few mins to see high CPU utilization (see the graph for every 5 mins)
28. You will also receive email notification

Clean Up Step

1. Select the instance and terminate it
2. Select the alarm and delete

(SNS Topic and Notification can be kept for upcoming labs)