CLOUD WATCH

Cloud | Watch → A service which is watching & monitoring activities on AWS Cloud.

- create resources such EC2 instance.
- Upload objects in S3, etc.

>> It is a resource monitoring service.

>> Cloud Watch acts like a 'gatekeeper' for an AWS account, because it helps us in understanding & implementing the monitoring, alerting, reporting & logging to keep the track of the activities which is happening in a particular AWS account.

>> Cloud Watch as a service is used to monitor the other services that are running on AWS account.

Features of CloudWatch:

1. Monitoring: CloudWatch helps us implementing monitoring to see how the resources are performing & also detect when something abnormal happens.

2. Metrics: Metrics are the basis on which monitoring are done.

-> Metrics provide us real-time metrics(performance data) which are updated regularly.

-> CPU utilization should be < than 70% -> 'Metric'

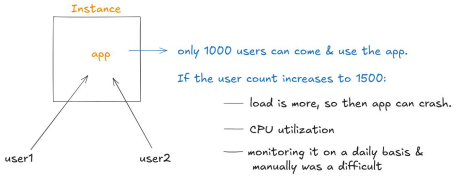
3. Alarms:

-> Alarms let's us take action automatically when a metric crosses a defined threshold.

-> Metric & Alarms goes hand-in hand.

-> Eg: If memory utilization of and EC2 instance > 80 % : send an email and create one more instance.

Metric — Action (alarms)



-> If the user count crosses 1200 & CPU utilization crosses 75%, send me an email :

This is an 'alert' because of an 'event'

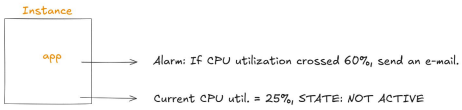
4. Logs:

-> CloudWatch logs stores, monitors & analyzes the log files from different services like EC2, Lambda, S3, VPC, etc.

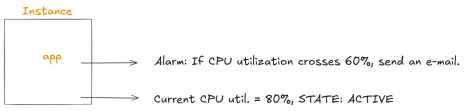
ALARMS

>> It warns us when something crosses a limit.

i. all alarms: shows all the alarms that has been created.



ii. in alarms: shows only the alarms that are activated.



Steps to set up an alarms & metrics

1. Create an instance (m/t type).
2. In new tab, Open CloudWatch.
3. Select 'Alarms' & in that click on 'All alarms' and click on 'Create Alarms'.
4. Under 'Metrics', click on 'Select Metrics'.
5. Then browse for EC2 and click on it.
6. Click on 'pre-instance metrics'.
7. Go the EC2 tab, find the instance & copy the 'Instance-ID'.
8. In Search bar in CloudWatch tab, paste the instance ID to select the Instance.
9. Select 'CPU utilization' and click on 'Select Metric'.
10. In 'Specify metric & condition', under 'Condition', select threshold type as 'static' & define the threshold (<,>,<=,>=) with the value. and click on 'Next'.
11. In 'Configure Actions', 1st 'Remove the notification'.
12. Scroll down and select 'EC2 actions' and click on 'Add EC2 actions', to select to the action which will be done if threshold crosses & click on 'Next'
13. Give an alarm name and click on Next.
14. Finally, click on 'Create alarm'.
15. Connect to instance and install this tool
    - sudo apt update
    - sudo apt install stress & run the cmd : stress --cpu 2 --timeout 120