AWS (Amazon Web Services)
CloudWatch

Introduction to CloudWatch:

Overview:

CloudWatch is system monitoring by AWS for cloud resources so monitoring is so important, and it will make sure that your applications are running the right way and It allows you to predict a problem before it occurs.

Concepts in this service:

- **Logs**
  The place to store your application logs in AWS, we must first define log groups they are whatever name we want, then we define your log expiration policy. So, you can have the logs re being retained indefinitely to never expire, or you can choose to expire them from anywhere between one day to 10 years.

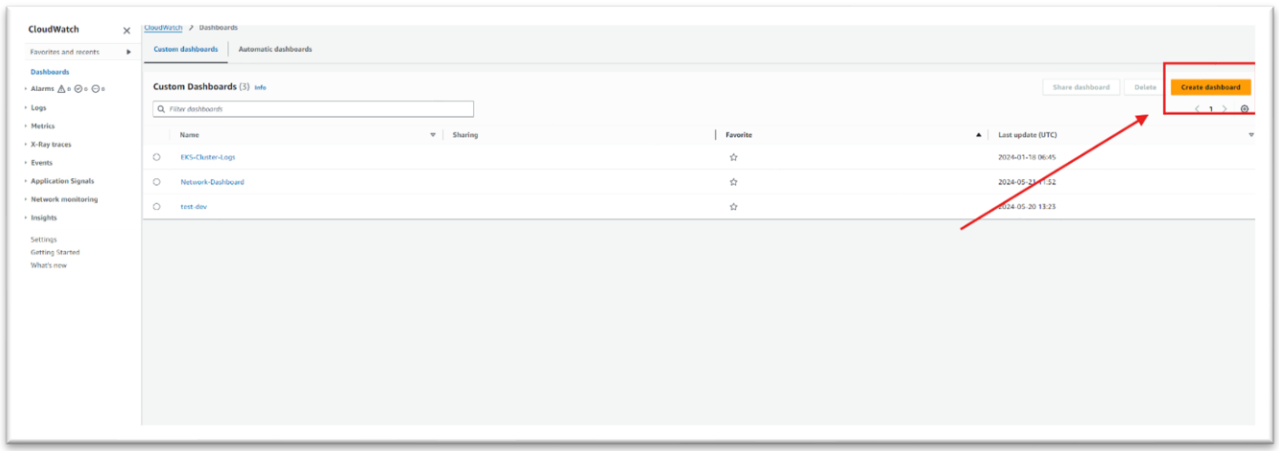
  And we have a feature called Live Tail that Enables you to view and analyze log events as they occur.
- **Metrics**
  a variable you need to monitor like CPU Utilization, the Network In .

- **Alarms**
  alarms as your system's early warning system. When a metric crosses a threshold, an alarm triggers an action.

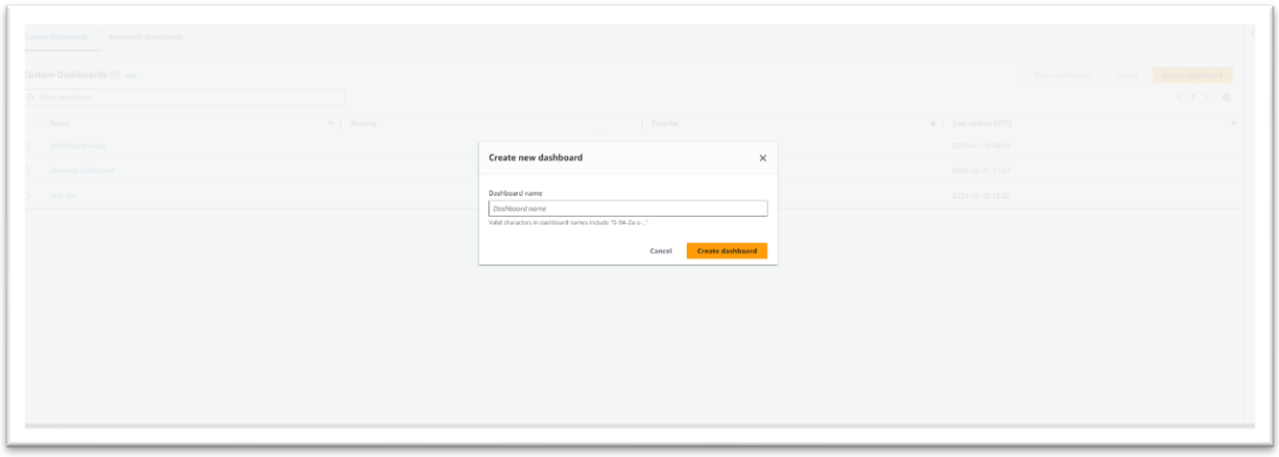
- **Dashboard**
  where you can create charts, graphs, and widgets to track specific metrics and keep an eye.

How can create a new Dashboard:

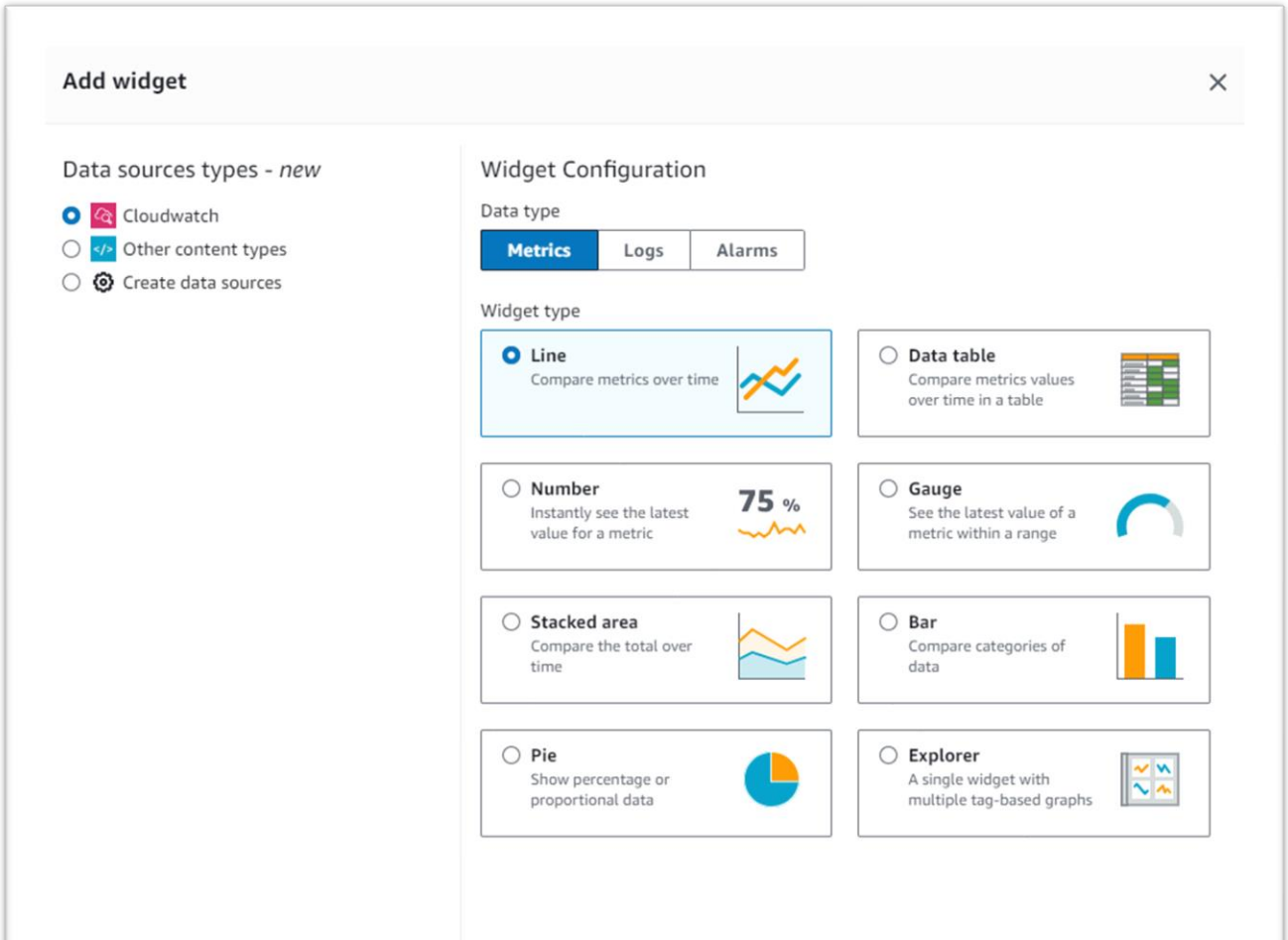
1) To create Dashboard we should have an account, log in to AWS, open the CloudWatch console, choose Dashboards from the navigation paned then select Create dashboard see picture



2) Choose the dashboard name

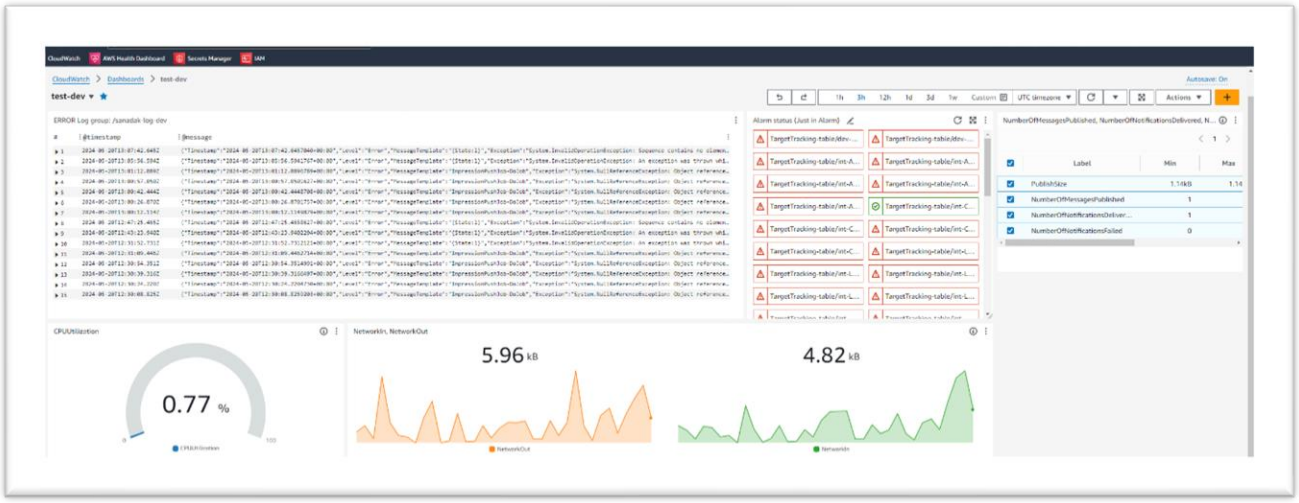


3) Add widget we need to monitor in dashboard



4) Finally, you can see what you added to the Dashboard

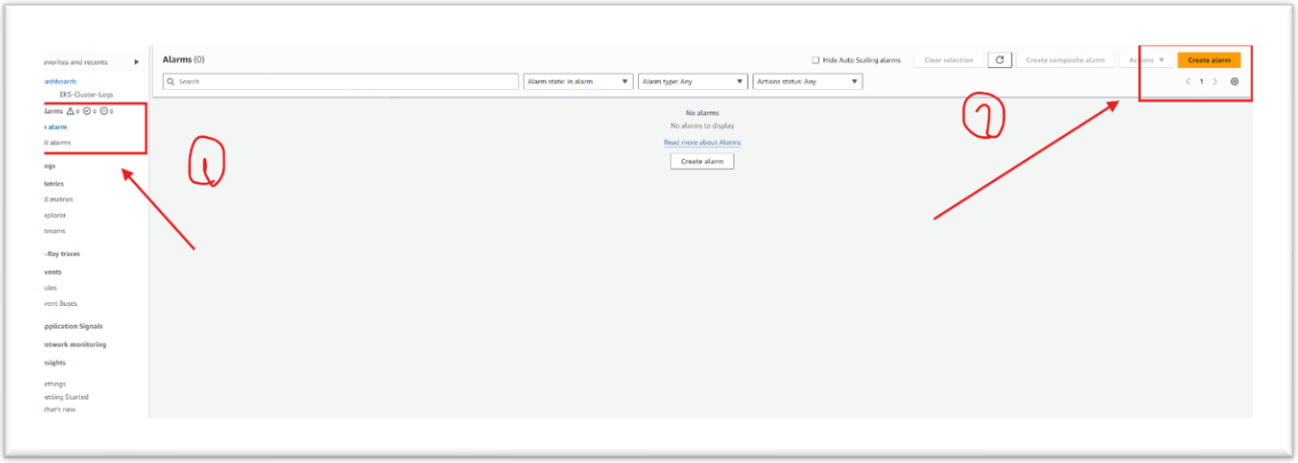
for example:



How can create alarm:

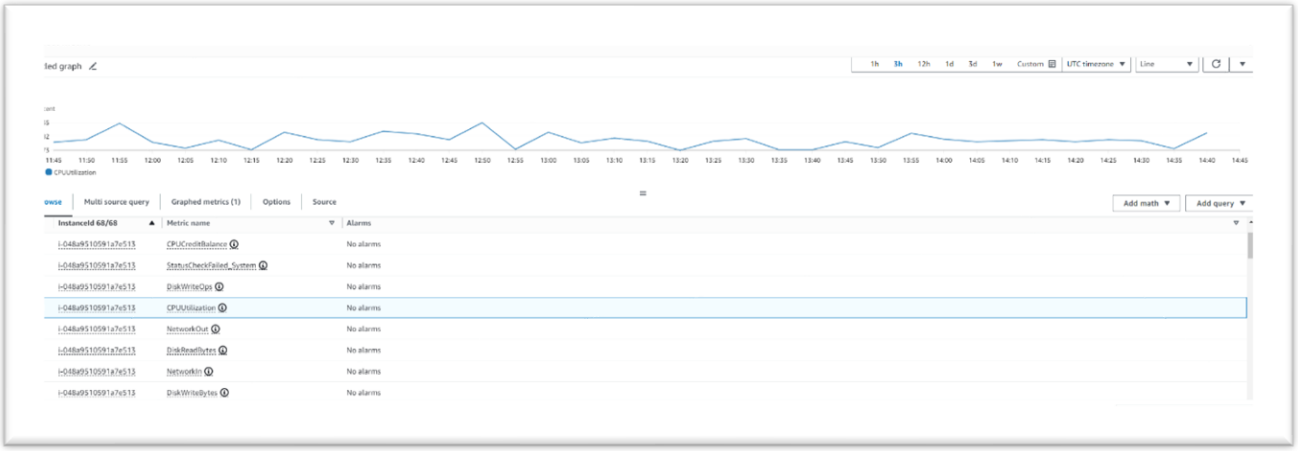
I want to create an alarm to alert me when the CPU up to 90% so let's go :

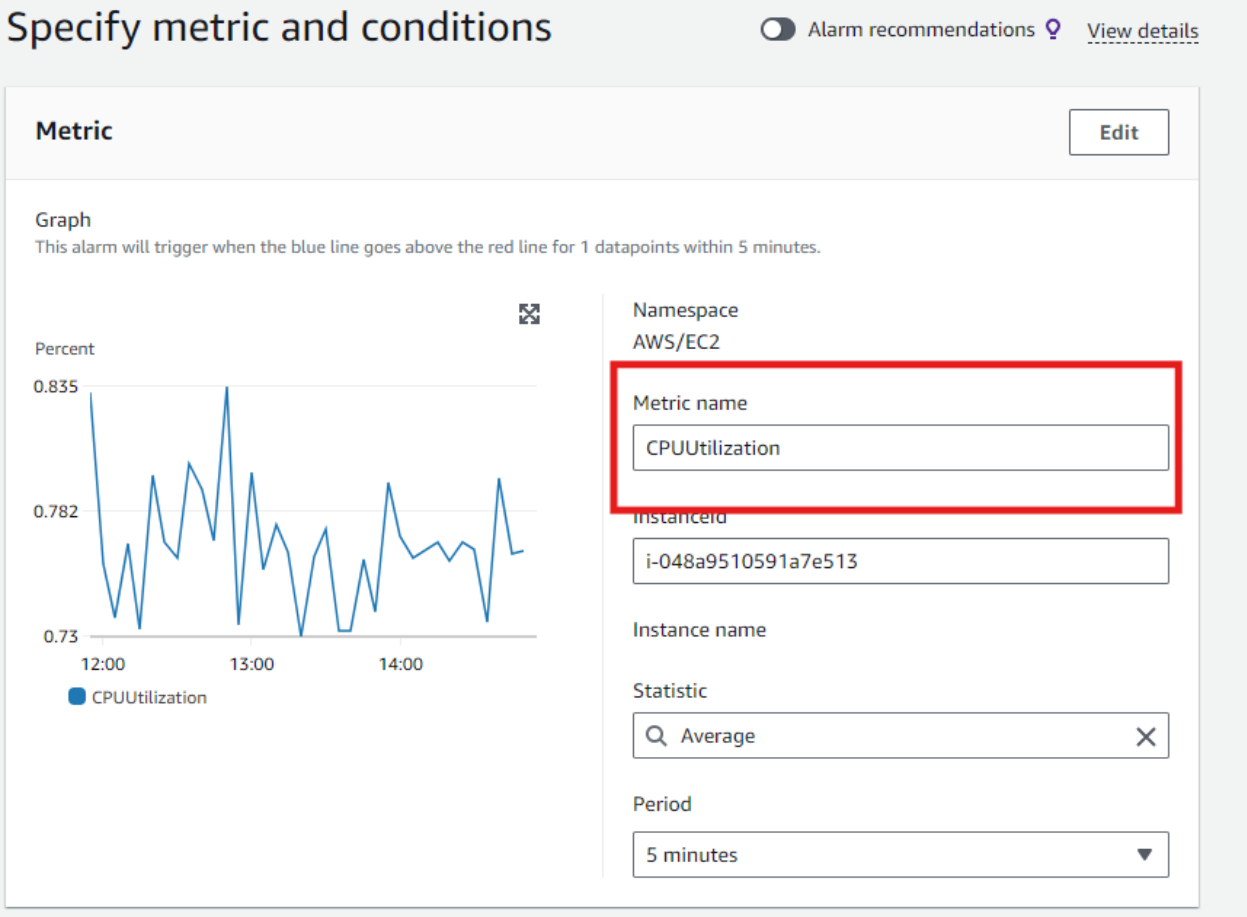
1) first we need log in to AWS, open the CloudWatch console chooseoose **Alarms and choose Create Alarm**



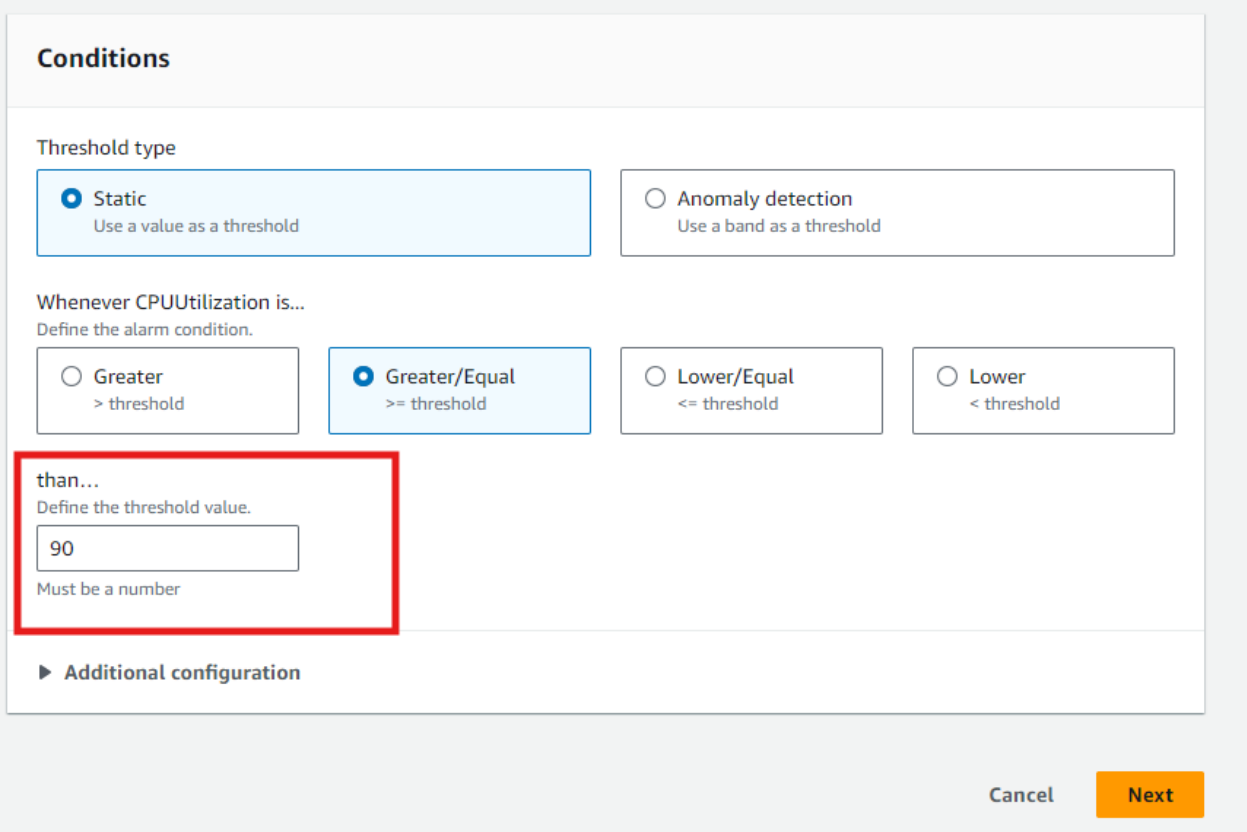
2) Select Specify metric and conditions

In our example, we will use CPU utilization

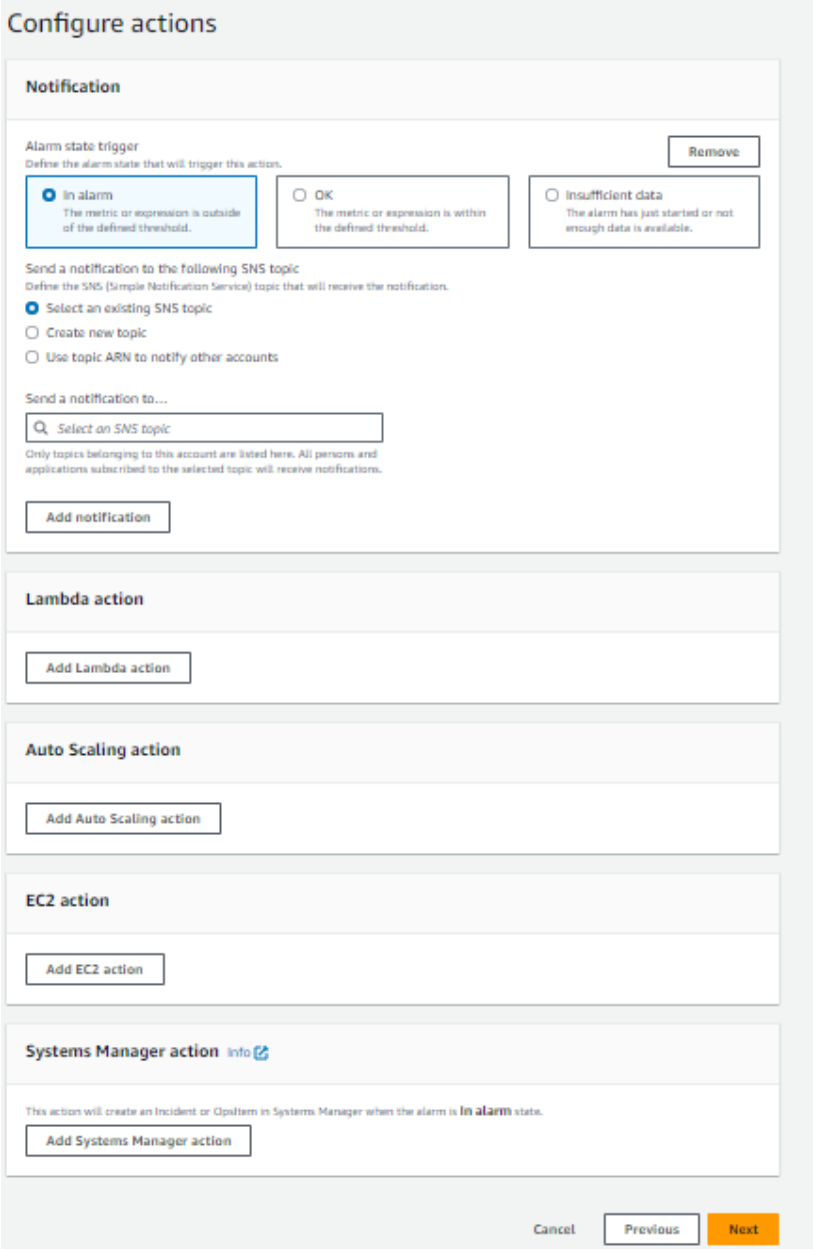




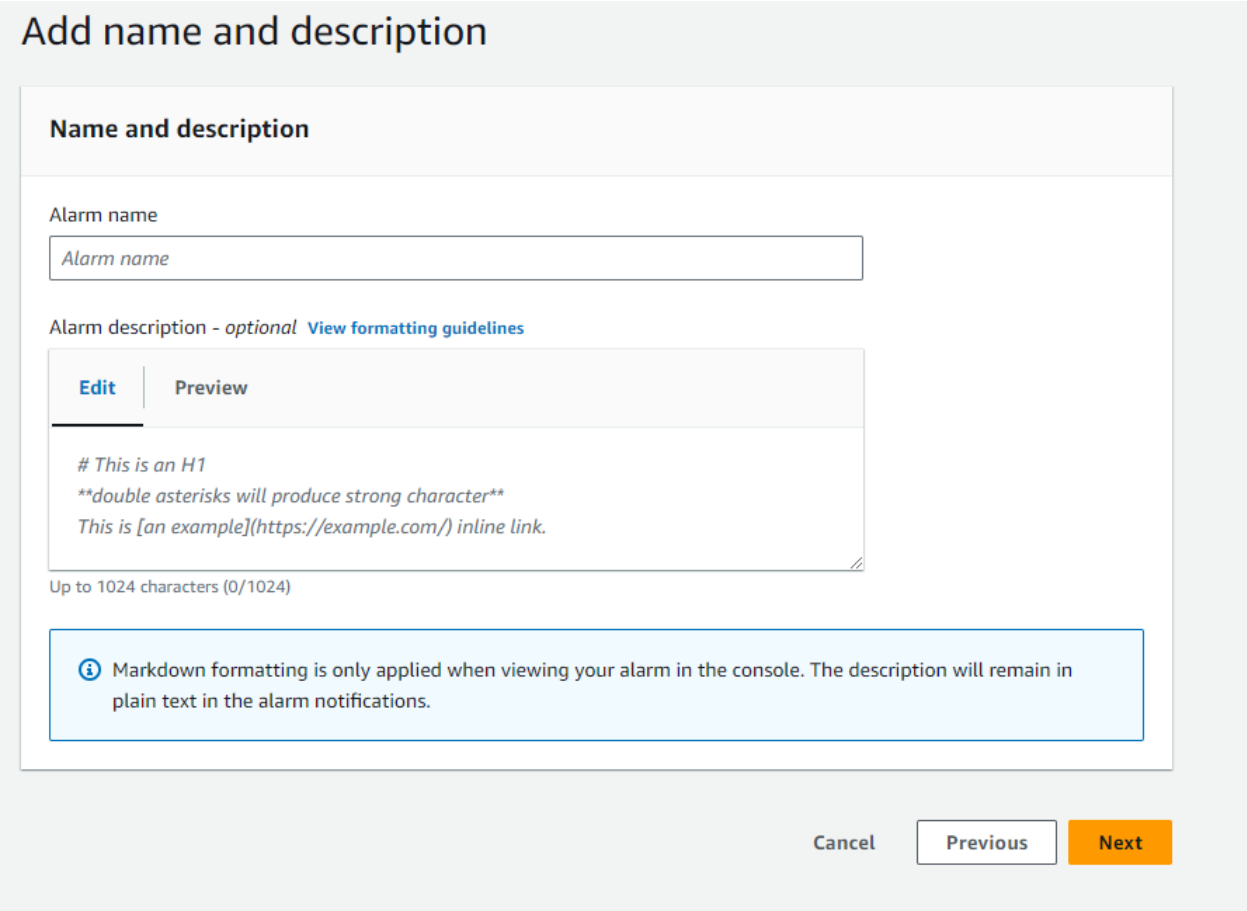
and then we choose the Conditions


Conditions
Threshold type
Static
Use a value as a threshold
Anomaly detection
Use a band as a threshold
Whenever CPUUtilization is...
Define the alarm condition.
Greater
> threshold
Greater/Equal
>= threshold
Lower/Equal
<= threshold
Lower
< threshold
than...
Define the threshold value.
90
Must be a number
Additional configuration
Cancel
Next

3) Configure actions:



4) Add name and description:



5) finally Preview and create the alarm.

TASK:

Create a Dashboard which targets all network issues:

I will do the same steps I mentioned previously, but I will choose what helps me solve network-related issues like:

- PacketsDropCount
- Active Connection Count
- Total Error Rate
- Network Receive/Transmit Throughput

And this was the result: