MODULE 9

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**Amazon CloudWatch:** A monitoring service to monitor your AWS resources and the applications that you run on AWS

**AWS CloudTrail:** A service to monitor and log every action that is performed on your AWS account for security purposes

**AWS Config:** A service that lets you assess, audit, and evaluate the configurations of your AWS resources

**Amazon Simple Notification Service (Amazon SNS):** An AWS tool that lets you send texts, emails, and messages to other cloud services and send notifications in various forms from the cloud to the client

AWS provides many interconnected services that provide a complex basis with which to accomplish tasks in the cloud. No matter a company's size, it is essential to monitor and track your cloud services. This helps you to ensure that all of the cloud assets are running smoothly and to be aware if anything out of the ordinary occurs.

CloudWatch is a monitoring service to monitor your AWS resources and the applications that you run o AWS. CloudTrail and CloudWatch are both cloud-monitoring services, but they perform different functions:

* **CloudTrail** monitors and logs all the actions that users have taken in a given AWS account. This means CloudTrail logs each time someone uploads data, runs code, creates an Amazon Elastic Compute Cloud (Amazon EC2) instance, or performs any other action.
* **CloudWatch** monitors what all the different services are doing and which resources they are using. CloudTrail logs activities, whereas CloudWatch monitors activities. CloudWatch helps you make sure that your cloud services are running smoothly. The services can also help you not use more of fewer resources that you expect, which is important for budget tracking.

****AWS Config**** is a service that lets you assess, audit, and evaluate the configurations of your AWS resources. AWS Config continuously monitors and records your AWS resource configurations and lets you automate the evaluation of recorded configurations against desired configurations. **AWS Config** records and normalizes the changes into a consistent format. AWS Config automatically evaluates the recorded configurations against the configurations you specify. Access change history and compliance results using the console or APIs. CloudWatch Events or SNS alert you when changes occur. Deliver change history and snapshot files to your S3 bucket for analysis.

****Amazon SNS**** is how AWS communicates within the cloud and with the outside world. When an event is initiated or a program alerts AWS to send out notifications, Amazon SNS sends the messages to users or other AWS services.

**LAB 9: Creating a CloudWatch Alarm that initiates an Amazon SNS Message**

1. Services > Application Integration > Simple Notification Service > Topics
2. Create a custom topic named ‘MoneyAlert’ and of type Standard
3. Create a custom subscription for MoneyAlert and set protocol as Email
4. Services > Management and Governance > CloudWatch > Alarms
5. Create Alarm > Select metric > Billing > Total Estimated Charge > EstimatedCharges
6. Choose the conditions as specified in the lab
7. Attach the alarm to the MoneyAlert topic
8. Name the alarm as ‘MoneyAlertAlarm’