

AWS Module 7 - Monitoring & Analytics

Amazon CloudWatch

- It is a web service that enables you to monitor and manage various metrics and configure alarm actions based on data from those metrics.
- Uses metrics to represent the data points for your resources. AWS services send metrics to CloudWatch.
- Then uses metrics to create graphs automatically that show how performance has changed over time.

CloudWatch alarms

- With CloudWatch, you can create alarms that automatically perform actions if the value of your metric has gone above or below a predefined threshold.
- eg: your company's developers use Amazon EC2 instances for application development or testing purposes. If the developers occasionally forget to stop the instances, the instances will continue to run and incur charges.
- In this scenario, you could create a CloudWatch alarm that automatically stops an Amazon EC2 instance when the CPU utilization percentage has remained below a certain threshold for a specified period. When configuring the alarm, you can specify to receive a notification whenever this alarm is triggered.

CloudWatch dashboard

- It enables you to access all the metrics for your resources from a single location. For example, you can use a CloudWatch dashboard to monitor the CPU utilization of an Amazon EC2 instance, the total number of requests made to an Amazon S3 bucket, and more. You can even customize separate dashboards for different business purposes, applications, or resources.

AWS CloudTrail

- With CloudTrail, you can view a complete history of user activity and API calls for your applications and resources.
- The Cloud event details answers questions such as: What happened? who made the request? when was the request made? and how was the request made?

CloudTrail Insights

- This optional feature allows CloudTrail to automatically detect unusual API activities in your AWS account.
- For example, CloudTrail Insights might detect that a higher number of Amazon EC2 instances than usual have recently launched in your account.

AWS Trusted Advisor

- It is a web service that inspects your AWS environment and provides real-time recommendations in accordance with AWS best practices.
- Trusted Advisor compares its findings to AWS best practices in five categories: cost optimization, performance, security, fault tolerance, and service limits. For the checks in each category, Trusted Advisor offers a list of recommended actions and additional resources to learn more about AWS best practices.

AWS Trusted Advisor dashboard

- When you access the Trusted Advisor dashboard on the AWS Management Console, you can review completed checks for cost optimization, performance, security, fault tolerance, and service limits.
- For each category:
- The green check indicates the number of items for which it detected **no problems**.
- The orange triangle represents the number of recommended **investigations**.
- The red circle represents the number of recommended **actions**.

Which tasks can you perform using AWS CloudTrail? (Select TWO.)



Monitor your AWS infrastructure and resources in real time



Track user activities and API requests throughout your AWS infrastructure



View metrics and graphs to monitor the performance of resources



Filter logs to assist with operational analysis and troubleshooting



Configure automatic actions and alerts in response to metrics

Which actions can you perform using Amazon CloudWatch? (Select TWO.)



Monitor your resources' utilization and performance



Receive real-time guidance for improving your AWS environment



Compare your infrastructure to AWS best practices in five categories



Access metrics from a single dashboard



Automatically detect unusual account activity

Which service enables you to review the security of your Amazon S3 buckets by checking for open access permissions?



Amazon CloudWatch



AWS CloudTrail



AWS Trusted Advisor



Amazon GuardDuty



Incorrect

The correct response option is **AWS Trusted Advisor**.

AWS Trusted Advisor is a web service that inspects your AWS environment and provides real-time recommendations in accordance with AWS best practices. The inspection includes security checks, such as Amazon S3 buckets with open access permissions.

The other response options are incorrect because:

- Amazon CloudWatch is a web service that enables you to monitor and manage various metrics for the resources that run your applications.
- AWS CloudTrail is a web service that enables you to review details for user activities and API calls that have occurred within your AWS environment.
- Amazon GuardDuty is a service that provides intelligent threat detection for your AWS environment and resources. It identifies threats by continuously monitoring the network activity and account behavior within your AWS environment.

Which categories are included in the AWS Trusted Advisor dashboard? (Select TWO.)



Reliability



Performance



Scalability



Elasticity



Fault tolerance

<https://github.com/Ayesha-Siddiqua>