

AWS Cloud watch

1. Provide a catalog of standard reports that you can use to analyze trends and monitor system performance
2. To reduce unnecessary operating costs by sending notifications in case of unreasonable pricing issues.
3. Detect problems early to prevent disasters. Also prevent and reduce downtime and business losses.
4. Monitor the end-users experience and create reports which help to make improvements.

Amazon Cloud Watch is the component of AWS that provides real-time monitoring of AWS resources and customer applications running on Amazon infra.

Types of Monitoring offered by Amazon cloud watch

1. Basic Monitoring (Its free polls every 5 mins very few metrics)
2. Detailed Monitoring (Its charged polls every 1 min Wide range metrics)

Features:

1. Collects and tracks key metrics
2. Collects, monitors, and stores log files
3. Create alarms and sends notifications
4. Sends system events from AWS resource to AWS lambda, SNS, etc.

Resources Monitored by Cloud Watch

1. Virtual Instances EC2
2. DataBases AWS RDS
3. Data stored in Amazon S3
4. Elastic Load Balancers
5. Other AWS resources

Concepts:

Metrics: A *metric* represents a time-ordered set of data points that are published to CloudWatch. Think of a metric as a variable to monitor, and the data points represent the values of the variable over time.

Eg: X is variable table w.r.t to Y

Dimension: A *dimension* is a name/value pair that uniquely identifies a metric. They can be considered as categories of characteristics that describe a metric. We can assign up to 10 dimensions to a metric.

Statistics are metrics data aggregations over specified periods of time. Aggregations are made using the namespace, metric name, dimensions within the time period you specify.

An **Alarm** can be used to automatically initiate actions on your behalf. It watches a single metric over a specified time period and performs one or more specified actions

Amazon cloud Watch ---> collect

Amazon CloudWatch Events:

It is a part of *Amazon Cloud Watch* which delivers a *near real-time stream of system events* that allows you to monitor and respond to the changes in your AWS resources by means of rules that route events to one or more targets.

Amazon CloudWatch logs:

It is used to monitor, store and access log files from AWS resources like Amazon EC2 instances, Amazon Cloud Trail, Route 53, and others.

Log Event is the record of activity by resources or application being monitored.

Log Stream is a sequence of log events that share the same source.

Log Group represents groups of log streams that share the same monitoring and access control.