TNGS Learning Solutions
AWS Solutions Architect
Online Course
CloudWatch

CloudWatch

- Amazon CloudWatch is a monitoring and observability service provided by Amazon Web Services (AWS) that enables you to collect and track metrics, collect and monitor log files, and set alarms.
- It helps you gain operational insight into your AWS resources and applications, ensuring they run smoothly and efficiently.

CloudWatch

- **Metrics**: CloudWatch collects and stores metrics, which are data points representing the behavior of your AWS resources and applications over time. Metrics can be generated from various AWS services, such as Amazon EC2, Amazon RDS, and AWS Lambda. You can also publish custom metrics from your applications.
- **Dashboards**: You can create custom dashboards to visualize your metrics, helping you gain insights into the performance and health of your AWS resources. Dashboards allow you to aggregate and display multiple metrics and create a visual representation of your system's status.

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- **Alarms**: CloudWatch alarms enable you to set thresholds on your metrics and trigger actions when those thresholds are breached. For example, you can set up alarms to send notifications or automatically scale resources when CPU utilization exceeds a certain level.
- **Logs**: CloudWatch Logs allows you to collect, store, and monitor log files from various AWS services and applications. You can also ingest custom log data. Log data can be searched, analyzed, and retained for auditing and troubleshooting purposes.

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- **Log Insights**: CloudWatch Logs Insights provides a powerful query language that makes it easy to search, filter, and analyze log data. It helps you identify patterns, troubleshoot issues, and gain operational insights from your log data.
- **Events**: CloudWatch Events enables you to respond to changes in your AWS environment and take automated actions. You can create rules that trigger actions when specific events occur, such as launching an EC2 instance or changing a security group.

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- **Retentions**: You can define retention policies for your metrics and log data to control how long they are stored. This helps you manage costs and compliance requirements.
- **Integration**: CloudWatch seamlessly integrates with other AWS services, such as AWS Lambda, to automate responses to events, and AWS SNS for notification delivery. You can also use CloudWatch data in conjunction with AWS CloudFormation templates.

CloudWatch

- **Cross-Account and Cross-Region**: CloudWatch supports cross-account and cross-region data collection and sharing, allowing you to centralize monitoring and observability across multiple AWS accounts and regions.
- **Anomaly Detection**: CloudWatch Anomaly Detection uses machine learning algorithms to analyze historical data and create baseline patterns for your metrics. It can then detect anomalies or deviations from those patterns, helping you identify issues proactively.

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- **Application Insights**: For applications running on AWS, CloudWatch Application Insights provides automated monitoring and troubleshooting capabilities, making it easier to identify and resolve application performance issues.
- Amazon CloudWatch is a central component of AWS for monitoring and troubleshooting your AWS resources and applications.
- It provides essential tools for maintaining the health and performance of your cloud infrastructure and services, enabling you to ensure reliability and responsiveness for your customers and users.