



AWS CloudWatch

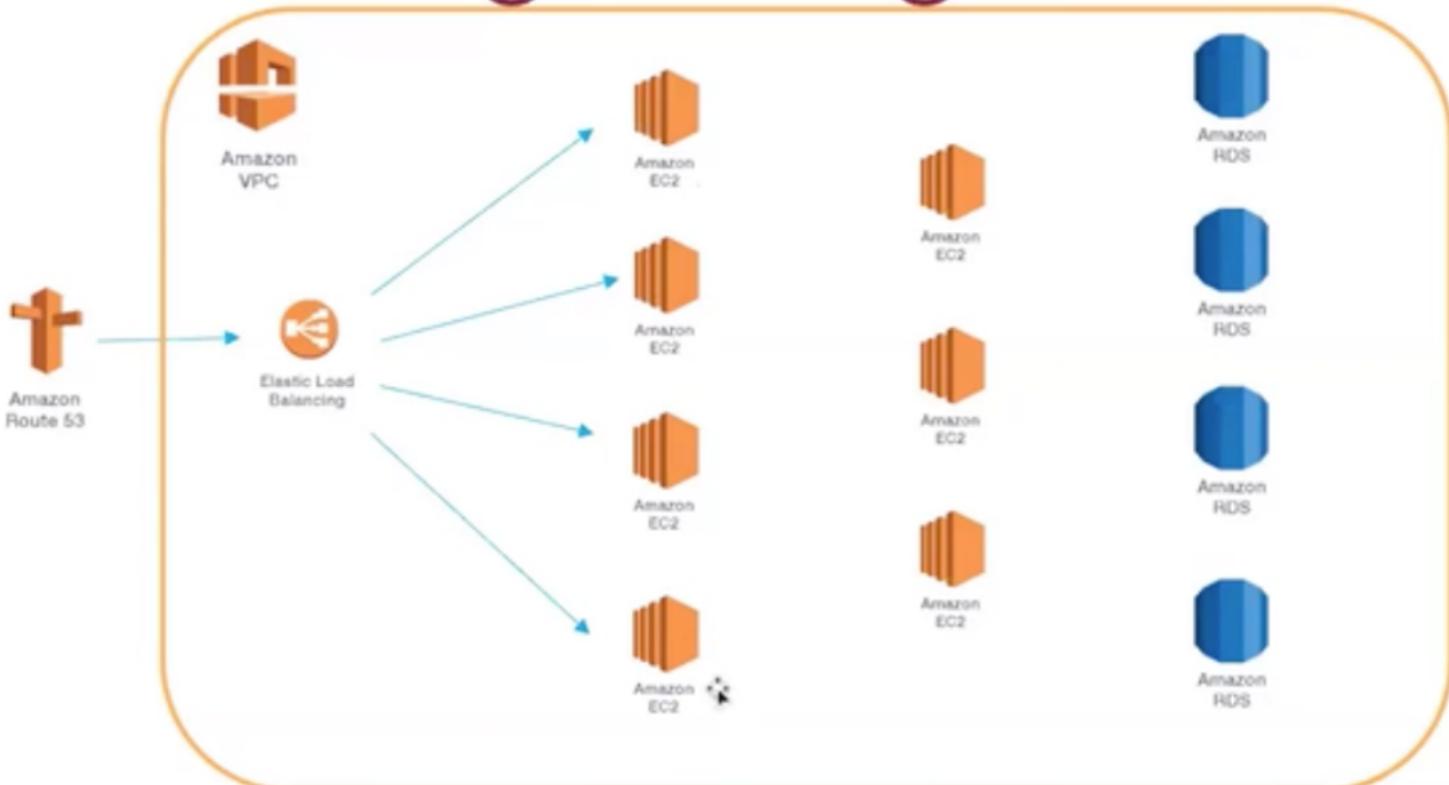


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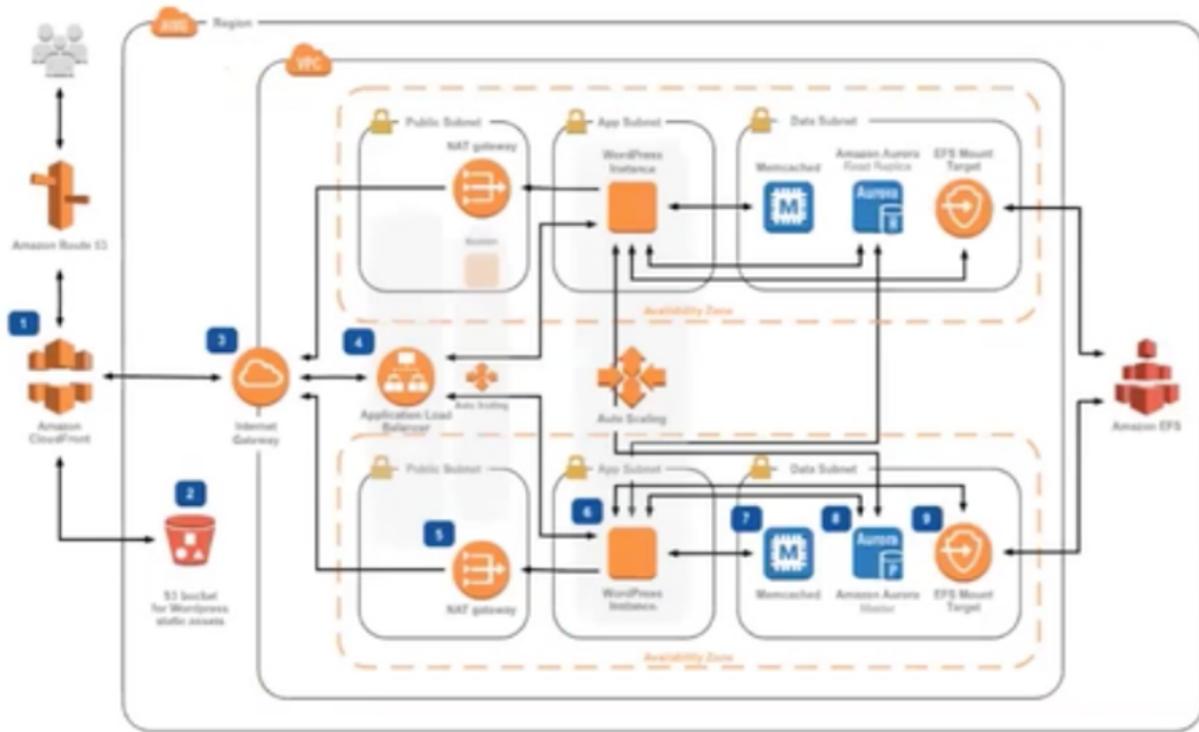
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Calling Manager



Calling Manager



CloudWatch

What is CloudWatch?



- CloudWatch is the **monitoring service** of AWS.
- It enables you to monitor **metrics of resources and applications** that run **on AWS** as well as **on-premise servers**.

CloudWatch

What is CloudWatch?



- You can get logs, set alarms, trigger events and analyze utilization by CloudWatch.

CloudWatch

Basic Components



- **Metrics:** Metrics are the **measurable data** about your resources, apps or services like EC2 instance CPU utilization or the number of objects in an S3 bucket.

CloudWatch

Basic Components



- Dashboards:** Dashboards enable you to create graphs and visualize your cloud resources and applications according to your needs.

CloudWatch

Basic Components



Line
Compare metrics over time



Stacked area
Compare the total over time

11

Number
Instantly see the latest value for a metric

Aa

Text
Free text with multi-line rendering



Logs view
Express results from Log Insights



Alarm status
Instantly see the status of your alarms in a grid view

- **Dashboards:** You can leverage dashboards as customizable home pages in the CloudWatch console to view metrics, logs and alarms.

CloudWatch

Basic Components



- **Awards:** Alarms enables you to monitor CloudWatch metrics and to receive notifications if the metrics fall outside of the thresholds (higher or lower) that you set.

CloudWatch

Basic Components

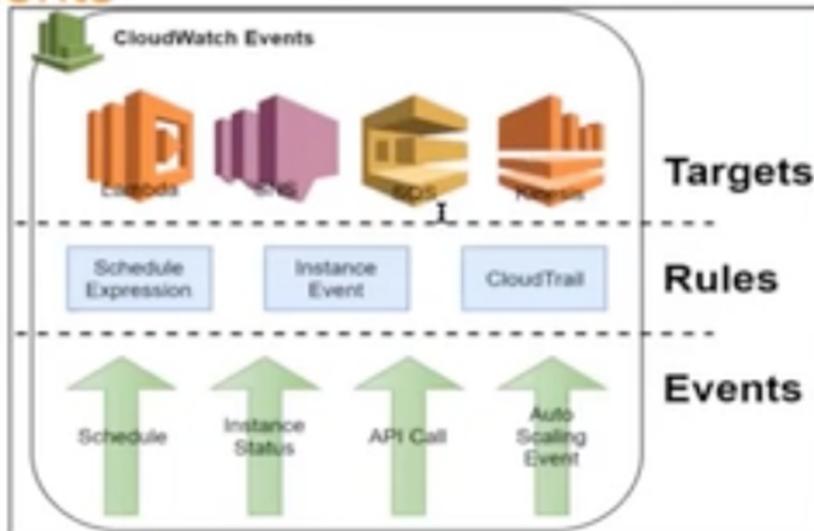
The screenshot shows the AWS CloudWatch interface. On the left, there's a sidebar with navigation links: CloudWatch, Dashboards, Alarms, ALARM (with status OK), Billing, Events, Rules, Event Buses, Logs (which is selected and highlighted in orange), Insights, Metrics, Settings, and Favorites. The main content area shows a breadcrumb trail: CloudWatch > Log Groups > apache-access > apache-access. Below this is a search bar with 'Filter events' and a date range 'all 2019-04-30 (12:31:05)'. A 'Expand all' button is also present. The main table lists log events with columns for 'Time (UTC +00:00)' and 'Message'. The table contains approximately 20 log entries from April 30, 2019, at various times between 11:55:52 and 19:45:48 UTC.

Time (UTC +00:00)	Message
2019-04-30 11:55:52	182.73.116.202 - - [30/Apr/2019:11:55:47 +0000] "GET / HTTP/1.1" 200 11173 "-" "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/74.0.3729.169 Safari/537.36"
2019-04-30 16:17:47	45.168.138.131 - - [30/Apr/2019:16:17:42 +0000] "GET / HTTP/1.1" 200 11173 "-" "Mozilla/5.0 (Windows NT 10.0; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/74.0.3729.169 Safari/537.36"
2019-04-30 17:02:10	61.219.111.153 - - [30/Apr/2019:17:02:05 +0000] "-" 408 0 "-" "
2019-04-30 17:08:12	185.209.0.12 - - [30/Apr/2019:17:08:07 +0000] "x03" 400 0 "-" "
2019-04-30 18:05:53	180.251.54.70 - - [30/Apr/2019:18:05:48 +0000] "GET / HTTP/1.1" 200 11229 "-" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_11_6) AppleWebKit/601.7.7 (KHTML, like Gecko) Version/11.0.1 Safari/601.7.7"
2019-04-30 19:43:12	109.94.121.118 - - [30/Apr/2019:19:43:07 +0000] "GET / HTTP/1.1" 200 11173 "-" "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/74.0.3729.169 Safari/537.36"
2019-04-30 19:45:45	183.178.64.143 - - [30/Apr/2019:19:45:44 +0000] "GET /mysql/admin/index.php?lang=en HTTP/1.1" 404 458 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/74.0.3729.169 Safari/537.36"
2019-04-30 19:45:45	183.178.64.143 - - [30/Apr/2019:19:45:44 +0000] "GET /mysql/badadmin/index.php?lang=en HTTP/1.1" 404 460 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/74.0.3729.169 Safari/537.36"
2019-04-30 19:45:46	183.178.64.143 - - [30/Apr/2019:19:45:45 +0000] "GET /mysql/sqlmanager/index.php?lang=en HTTP/1.1" 404 463 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/74.0.3729.169 Safari/537.36"
2019-04-30 19:45:47	183.178.64.143 - - [30/Apr/2019:19:45:46 +0000] "GET /phpmyadmin/index.php?lang=en HTTP/1.1" 404 465 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/74.0.3729.169 Safari/537.36"
2019-04-30 19:45:47	183.178.64.143 - - [30/Apr/2019:19:45:46 +0000] "GET /phpMyAdmin/index.php?lang=en HTTP/1.1" 404 457 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/74.0.3729.169 Safari/537.36"
2019-04-30 19:45:48	183.178.64.143 - - [30/Apr/2019:19:45:47 +0000] "GET /phpMyadmin/index.php?lang=en HTTP/1.1" 404 457 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/74.0.3729.169 Safari/537.36"

- **Logs:** Logs let you monitor, store, and access your log files from AWS or other resources. It also allows you to centralize these logs for querying and analyzing.

CloudWatch

Basic Components



- **Events:** An event indicates changes in your AWS environment. AWS resources can generate events when their state changes, or you can create rules that self-trigger on an automated schedule.

CloudWatch

How does it work?

- CloudWatch collects **metrics and logs** from AWS resources, applications and services running on AWS and **on-premises servers**.
- You can visualize applications and infrastructure using **Dashboards**; correlate logs and metrics side by side to troubleshoot and set **Alarms**.
- It also enables you to automate response to operational changes with **Events**.

CloudWatch

How does it work?



CloudWatch

Pricing

- No up-front commitment or minimum fee
- Pay for what you use
- Pricing varies by region
- Enables limited **Free Tier** usage

CloudWatch

Pricing

Free Tier:

Metrics	Basic Monitoring Metrics (at 5-minute frequency) 10 Detailed Monitoring Metrics (at 1-minute frequency) 1 Million API requests (not applicable to GetMetricData and GetMetricWidgetImage)
Dashboard	3 Dashboards for up to 50 metrics per month
Alarms	10 Alarm metrics (not applicable to high-resolution alarms)
Logs	5GB Data (ingestion, archive storage, and data scanned by Logs Insights queries)
Events	All events except custom events are included
Contributor Insights	1 Contributor Insights rule per month The first one million log events that match the rule per month
Synthetics	100 canary runs per month