



AWS Content Delivery Network Edge Week

Day 3 | September 29, 2021

Observability and Diagnostics with Amazon CloudFront

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Agenda

CloudFront Overview

Metrics

Console Reports

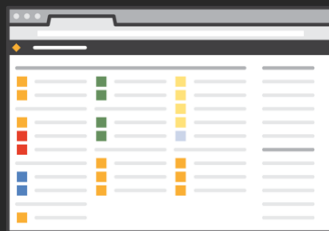
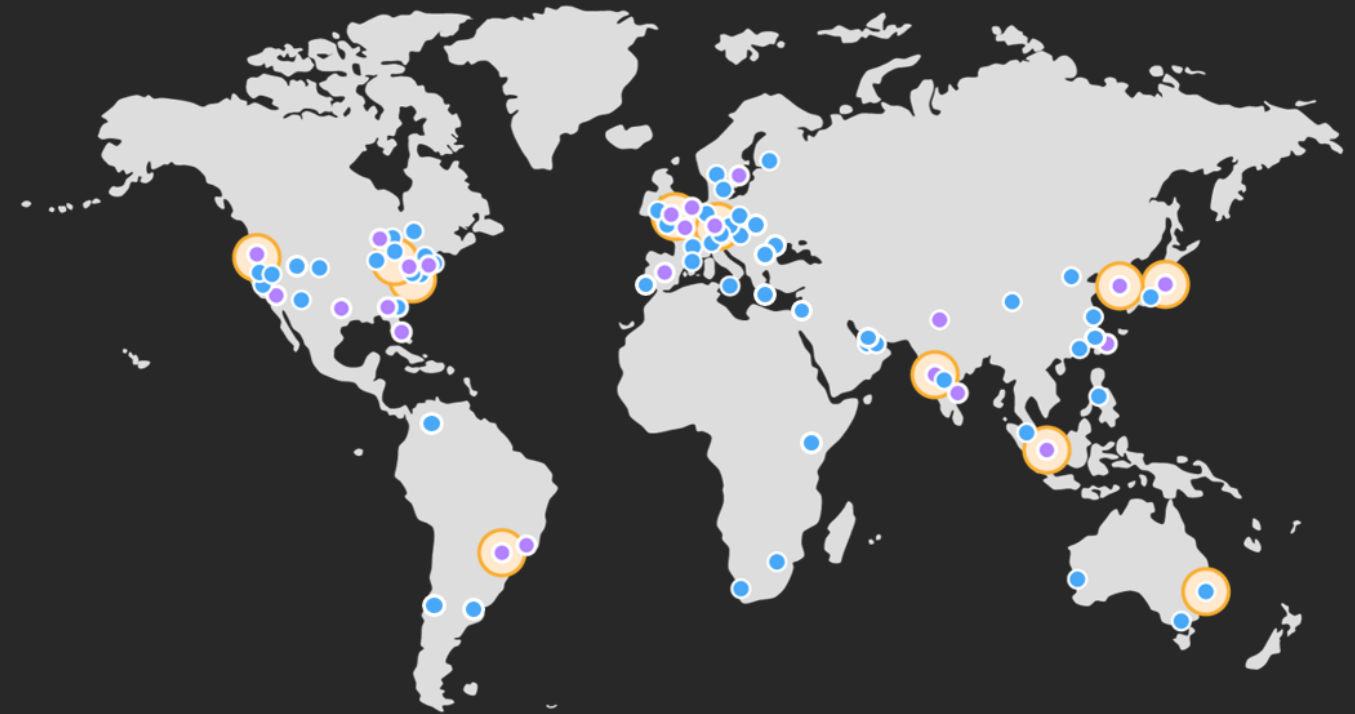
Logs and Usage Report

Real-time logs dashboard setup

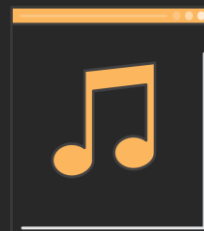
CloudFront Overview

Amazon CloudFront securely delivers data, videos, applications, and APIs to customers globally with low latency, high transfer speeds, and works seamlessly with AWS services such as Amazon S3, Amazon EC2, and Elastic Load Balancing.

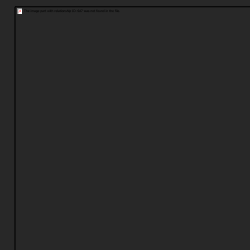
- 245+ edge locations
- 90 Cities
- 47 Countries



Whole site delivery



Media streaming for Video & Audio

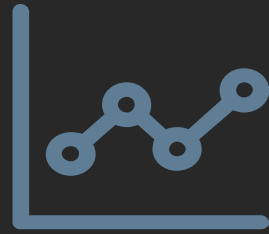


API acceleration



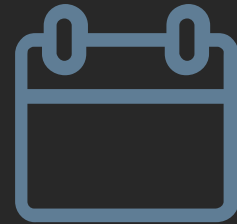
Large file downloads

Why monitor data?



Monitor traffic and configure alarms

- Metrics available in CloudWatch



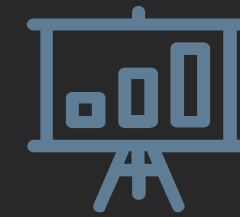
Understand usage patterns

- Reports available in CloudFront console



Real-time dashboards

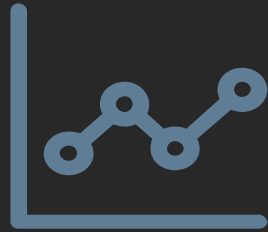
- Real-time logs in Kinesis Data Stream



Analyze usage from billing data

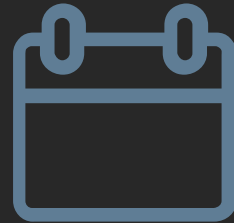
- Usage available in AWS Billing console

Observability on CloudFront



CloudWatch metrics

- Metrics available in CloudWatch
Requests, Error rates, Bytes Downloaded/Uploaded, Cache Hit Rate, Origin Latency



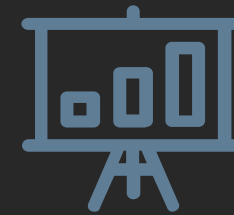
CloudFront Console reports

- Reports available in CloudFront console
- Cache Statistics, Popular Objects, Top Referrers, Usage, Viewer



Logs

- Logs in S3 bucket
- Real-time logs in Kinesis Data Stream

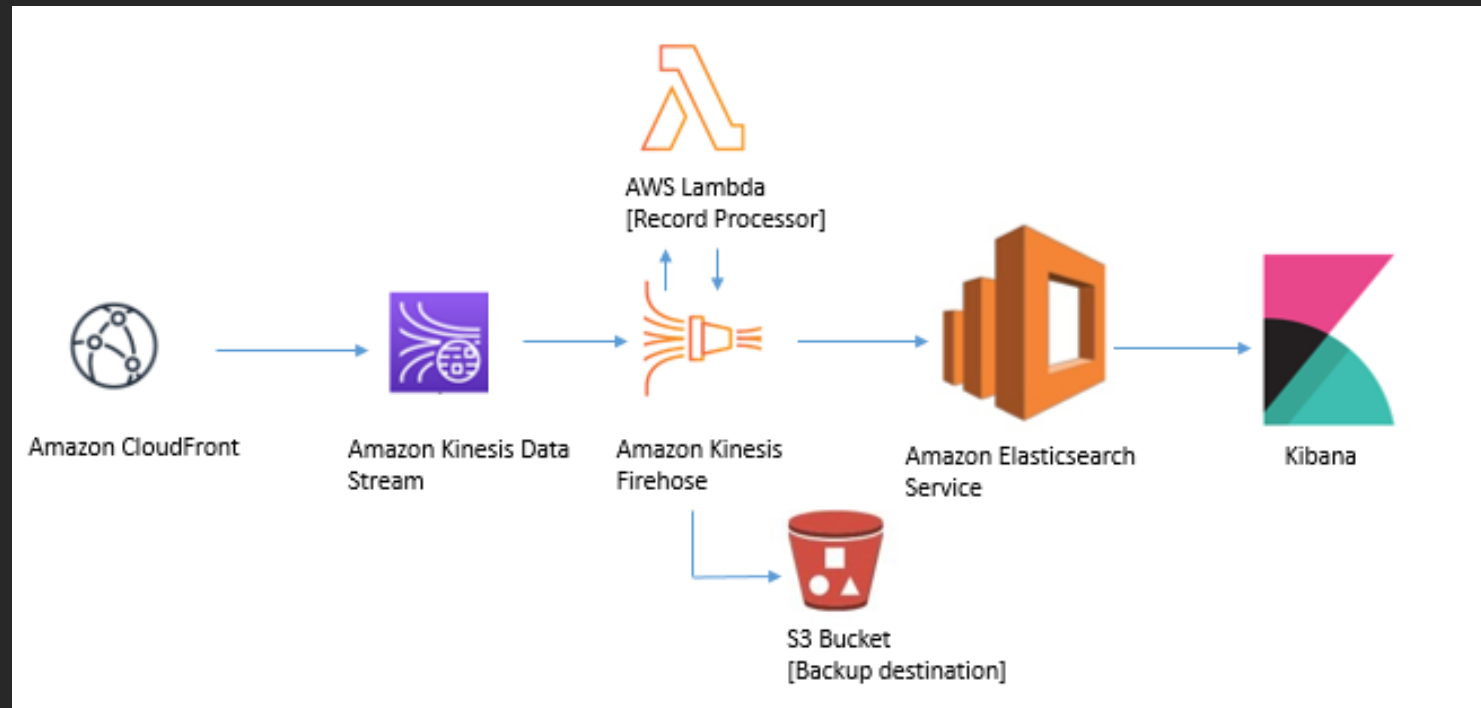


AWS Usage Report

- Report available to download in AWS Billing console after usage

CloudFront Real-time Logs

- Receive logs within 10 seconds
- Ability to configure the log delivery (choose log fields, define sampling rates, and setup logging for only selected cache behaviors).
- Logs delivered to a Kinesis Data Stream which can be published to any custom HTTP endpoint



CloudFront Real-time Logs

The screenshot shows the CloudFront console interface. The left-hand navigation menu has 'Logs' highlighted in red. The main content area is titled 'Logs' and has two tabs: 'Standard' and 'Real-time configurations', with the latter being selected. Below the tabs is a section for 'Distributions (10)' with a search bar and a table listing various distributions and their log settings.

Distribution ID	Standard logs	Real-time logs	S3 bucket
ESNFEQ2M...	Enabled	Enabled	amazonaws.com
ESVOCWEA...	Enabled	Enabled	3.amazonaws.com
E28LEL8...	Disabled	Enabled	Logging not enabled
E3E700...	Enabled	Enabled	v1ro9ewl40...
E29CJH4...	Enabled	Enabled	1v1ro9ewl40...
E1JMLYQ...	Disabled	Disabled	Logging not enabled
E2SRU3C...	Disabled	Disabled	Logging not enabled
E2XY9BT...	Disabled	Disabled	Logging not enabled
EMB2J3K...	Disabled	Disabled	Logging not enabled
E2CGO0Z...	Disabled	Disabled	Logging not enabled

The screenshot shows the 'Create configuration' page in the CloudFront console. It includes several sections for configuring the real-time logs: 'Settings' with a name field (set to 'Test'), 'Sampling rate' (set to 100%), and 'Fields' (with selected fields like timestamp, time-to-first-byte, etc.). The 'Endpoint' section shows a Kinesis data stream selected. The 'IAM role' section has 'Create new service role CloudFrontRealtimeLogConfigRole-Test' selected. At the bottom, there is a 'Distributions' section with a dropdown to select a distribution. 'Cancel' and 'Create configuration' buttons are at the bottom right.

The screenshot shows the 'Real-time configurations' page in the CloudFront console. It features a search bar and a table listing existing configurations with their names, sampling rates, and associated Kinesis data streams.

Name	Sampling rate	Kinesis data stream
GameDayConfig	100%	arn:aws:kinesis:us-east-1:...stream/GameDayT...
Testlogconfig	98%	arn:aws:kinesis:us-east-1:...stream/CloudFron...
betaTestConfig	1%	arn:aws:kinesis:us-east-1:...stream/CloudFron...
sam-rtl-config	100%	arn:aws:kinesis:us-east-1:...stream/CloudFron...

Demo



Thank you!

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