AWS CloudFront

CLARUSWAY
WAY TO REINVENT YOURSELF

Table of Contents

1 What is CloudFront?

CloudFront

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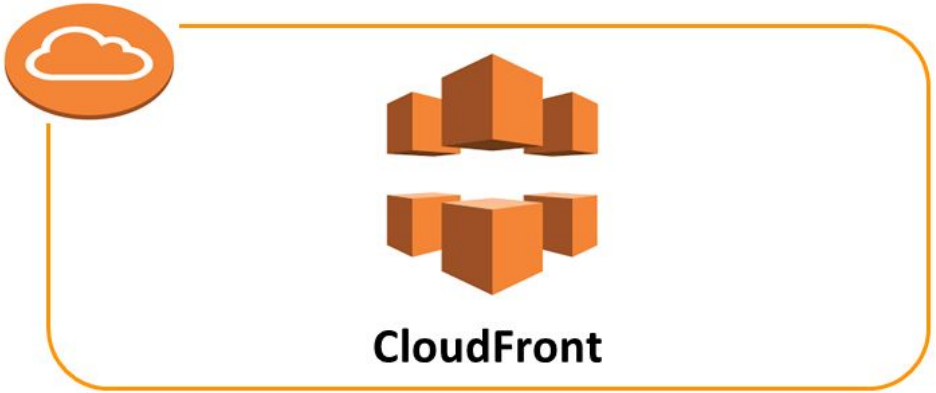


- CloudFront is the **Content Delivery Network (CDN)** of AWS.
- Basically, it is a globally distributed network located on different geographical places.

CloudFront

What is CloudFront?

Amazon CloudFront is a web service that speeds up distribution of our static and dynamic web content, such as .html, .css, .js, and image files, to our users. CloudFront delivers our content through a worldwide network of data centers called edge locations. When a user requests content that we're serving with CloudFront, the request is routed to the edge location that provides the lowest latency (time delay), so that content is delivered with the best possible performance.

- If the content is already in the edge location with the lowest latency, CloudFront delivers it immediately.
- If the content is not in that edge location, CloudFront retrieves it from an origin that we've defined—such as an Amazon S3 bucket, a Media Package channel, or an HTTP server (for example, a web server) that we have identified as the source for the definitive version of your content.

CloudFront

What is CloudFront?

- The aim of this service is to **provide faster distribution** to the dynamic or the static web contents.

- World-wide distributed data centers which are called **edge locations** are the backbone of CloudFront.

2

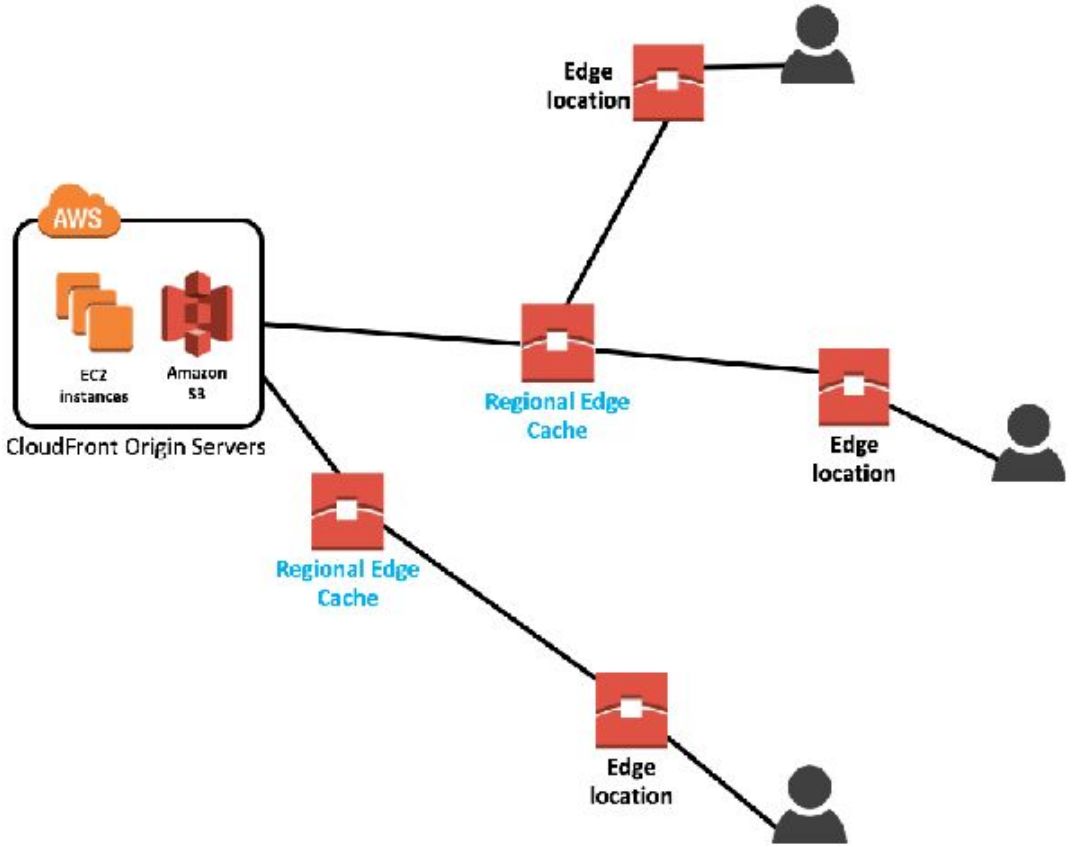
CloudFront Infrastructure

CloudFront

CloudFront Infrastructure

- AWS CloudFront has a world-wide network of **310+ Points of Presence (PoP)*:**
  - **300+ Edge Locations**
  - **13 Regional Edge Caches**

*as of November 2021.



CloudFront

Edge Locations

- CloudFront integrates with our AWS infrastructure and delivers content through a backbone of data centers known as edge locations.
- These edge locations are used to cache copies of our content for faster delivery to users at any location.
- Edge locations serve requests for CloudFront and Route 53. CloudFront is a content delivery network, while Route 53 is a DNS service.
- Requests going to either one of these services will be routed to the nearest edge location automatically.
- This allows for low latency no matter where the end user is located.

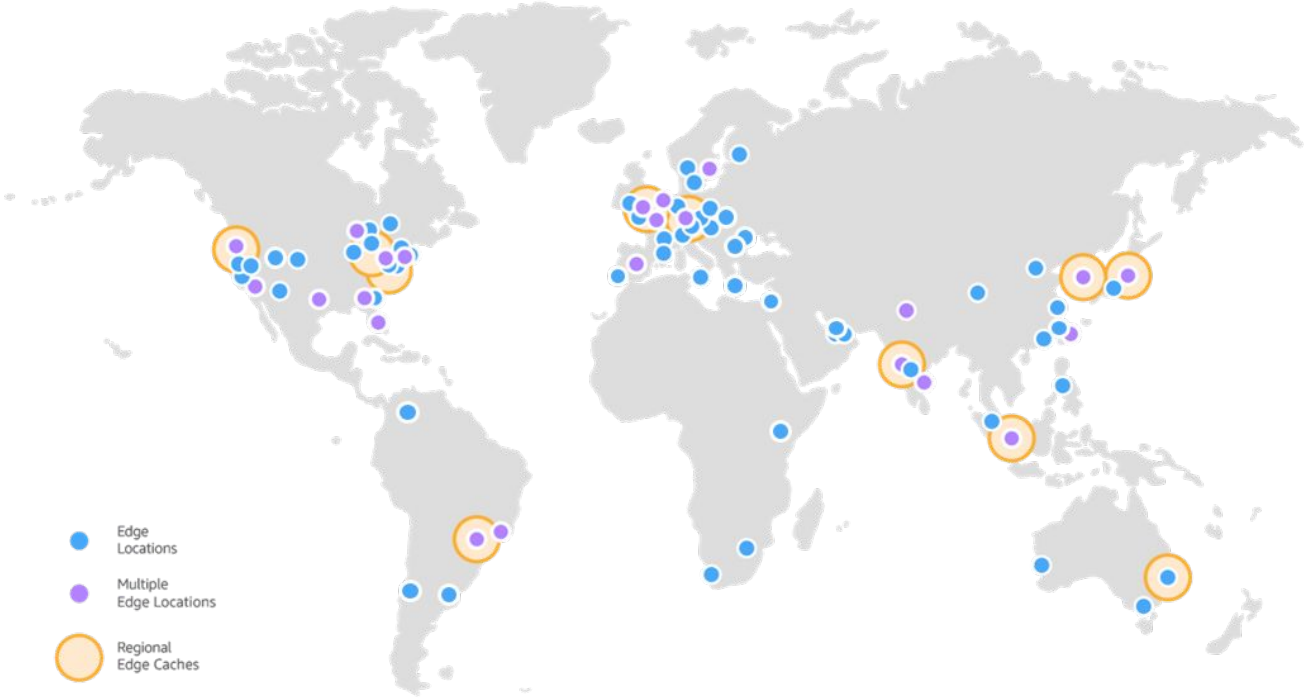
CloudFront

What is Regional Edge Cache?

- Regional Edge Cache is an addition to improve performance and also help reduce the load in our origin resources, minimizing operational burden associated with scaling our origin and reducing our origin costs.
- It brings more of our content closer to our viewers, even when the content is not popular enough to stay at a POP, to help improve performance for that content.
- Regional Edge Caches are turned on by default for our CloudFront distributions; we do not need to make any changes to our distributions to take advantage of this feature. There are also no additional charges to use this feature.
- These edge cache locations sit between our origin webserver and the 300+ global edge locations that serve traffic directly to our viewers. As the popularity of our objects reduce, individual edge locations may evict those objects to make room for more popular content.
- Regional Edge Caches have larger cache-width than any individual edge location, so our objects remain in cache longer at these locations.
- This helps keep more of our content closer to our viewers, reducing the need for CloudFront to go back to our origin webserver, and improving overall performance for viewers.
- For instance, our edge locations in Europe now go to the regional edge cache in Frankfurt to fetch an object before going back to our origin web server.

CloudFront

CloudFront Infrastructure



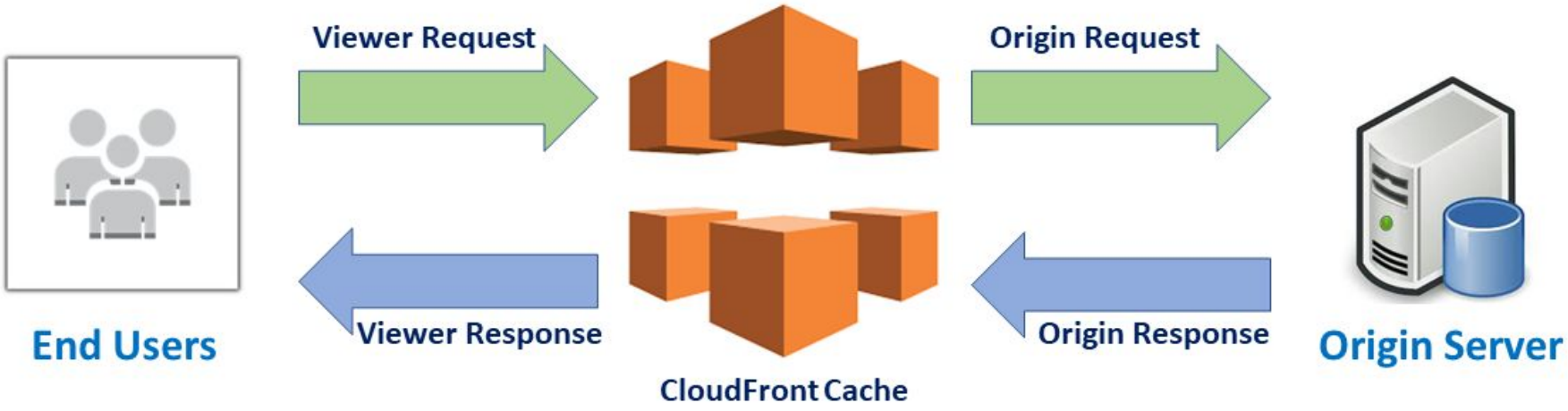
- These facilities are spread over 90+ cities across 47 countries*.

  * November 2020

3 How does CloudFront work?

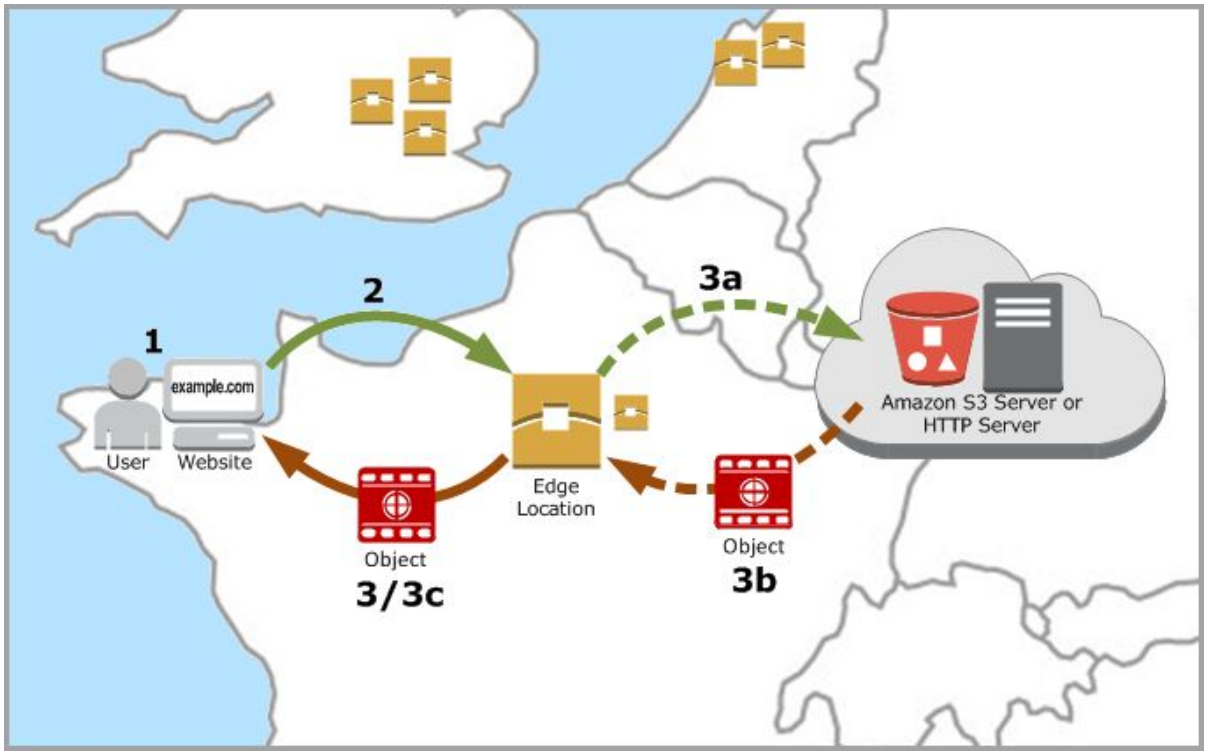
CloudFront

How does it work?



CloudFront

How does it work?

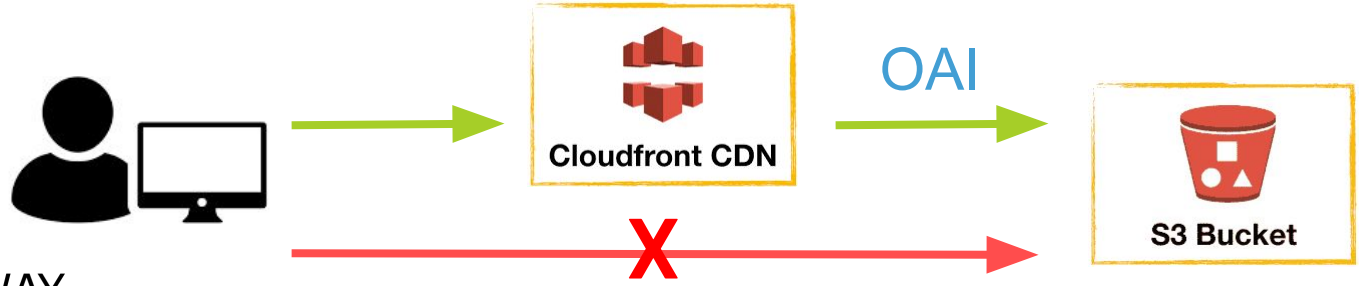


CloudFront

Origins

- Custom Origin (HTTP)
  - Elastic Load Balancer
  - EC2 Instance
  - S3 Static Website
  - Any HTTP server

- S3 Bucket (Enables OAI-Origin Access Identity)



CloudFront Pricing

CloudFront

Pricing

Free Tier

50 GB OF DATA TRANSFER OUT

12 months free

2,000,000 HTTP OR HTTPS REQUESTS

Each month for one year

On-demand

Amazon CloudFront charges are based on actual usage of the service in four areas:

DATA TRANSFER OUT (INTERNET/ORIGIN)

HTTP/HTTPS REQUESTS

INVALIDATION REQUESTS

FIELD LEVEL ENCRYPTION REQUESTS

DEDICATED IP CUSTOM SSL CERTIFICATES ASSOCIATED WITH A CLOUDFRONT DISTRIBUTION

Discounted Pricing

For customers who are willing to make certain minimum traffic commits (typically 10 TB/month or higher)

CONTACT US

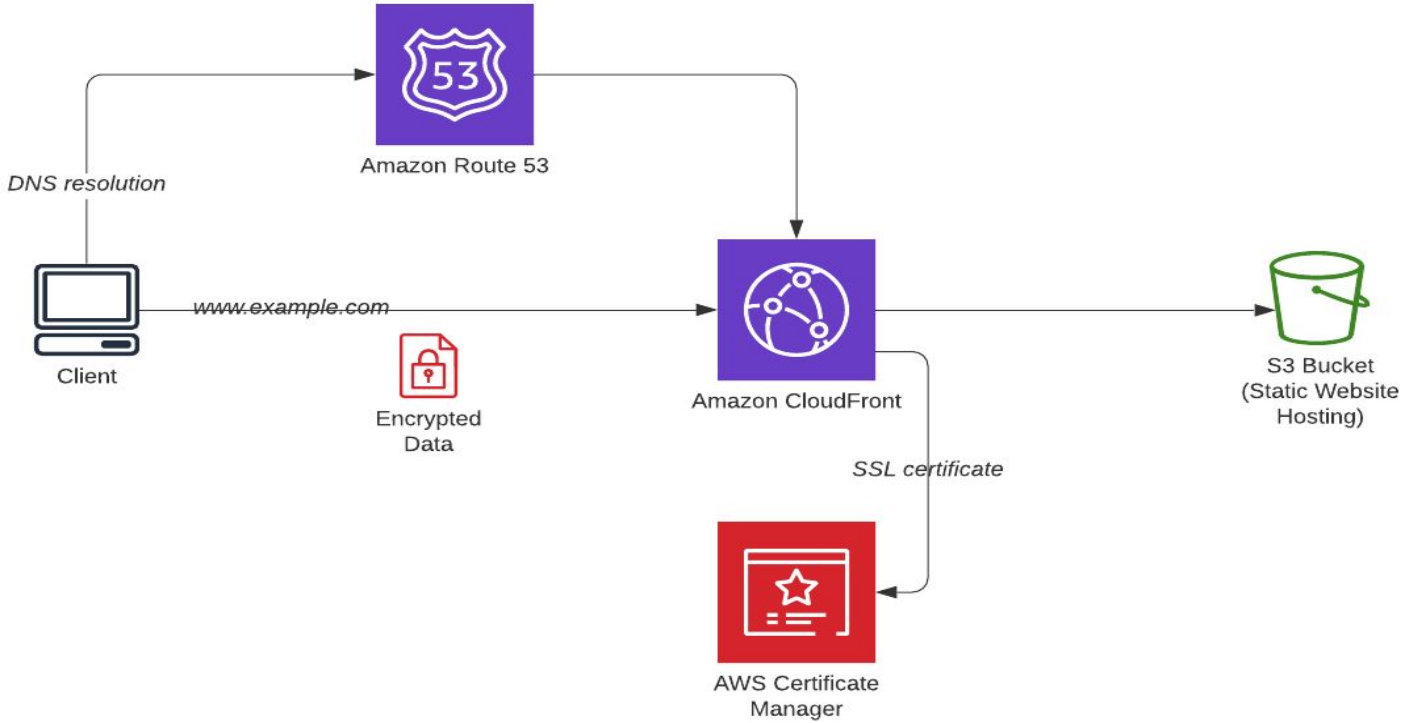
CloudFront

Pricing

- Pricing varies depending on **region** and **usage**. Thus, to be more cost effective setup your configuration regarding your goal, methods, end users and geographic locations.

CloudFront

Hands on Scenario



THANKS!

Any questions?

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