AWS CloudFront

CLARUSWAY
WAY TO REINVENT YOURSELF

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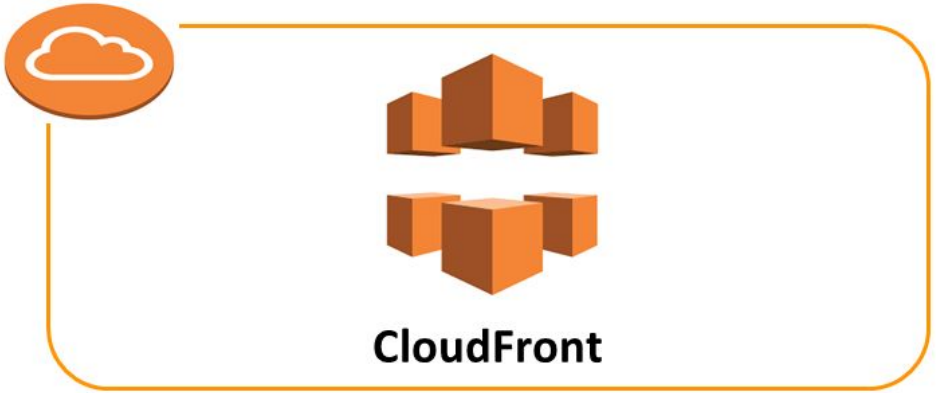
CloudFront

What is CloudFront?



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

CloudFront

What is Content Delivery Network?

- A content delivery network (CDN) refers to a geographically distributed group of servers which work together to provide fast delivery of Internet content.
- A CDN allows for the quick transfer of assets needed for loading Internet content including HTML pages, javascript files, stylesheets, images, and videos. The popularity of CDN services continues to grow, and today the majority of web traffic is served through CDNs, including traffic from major sites like Facebook, Netflix, and Amazon.
- A properly configured CDN may also help protect websites against some common malicious attacks, such as Distributed Denial of Service (DDOS) attacks.

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

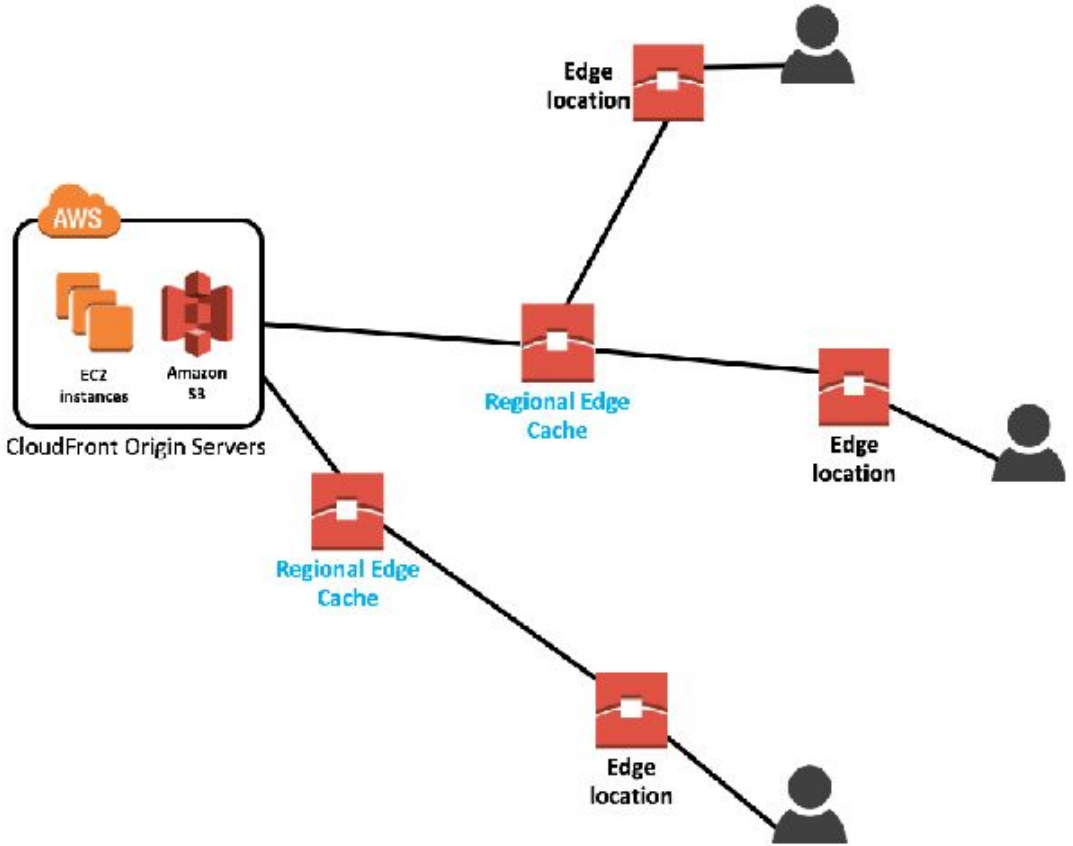
CloudFront Infrastructure

CloudFront

CloudFront Infrastructure

- AWS CloudFront has a world-wide network of **410+ Points of Presence (PoP)*:**
  - **400+ Edge Locations**
  - **13 Regional Edge Caches**

*as of June 2022.



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.

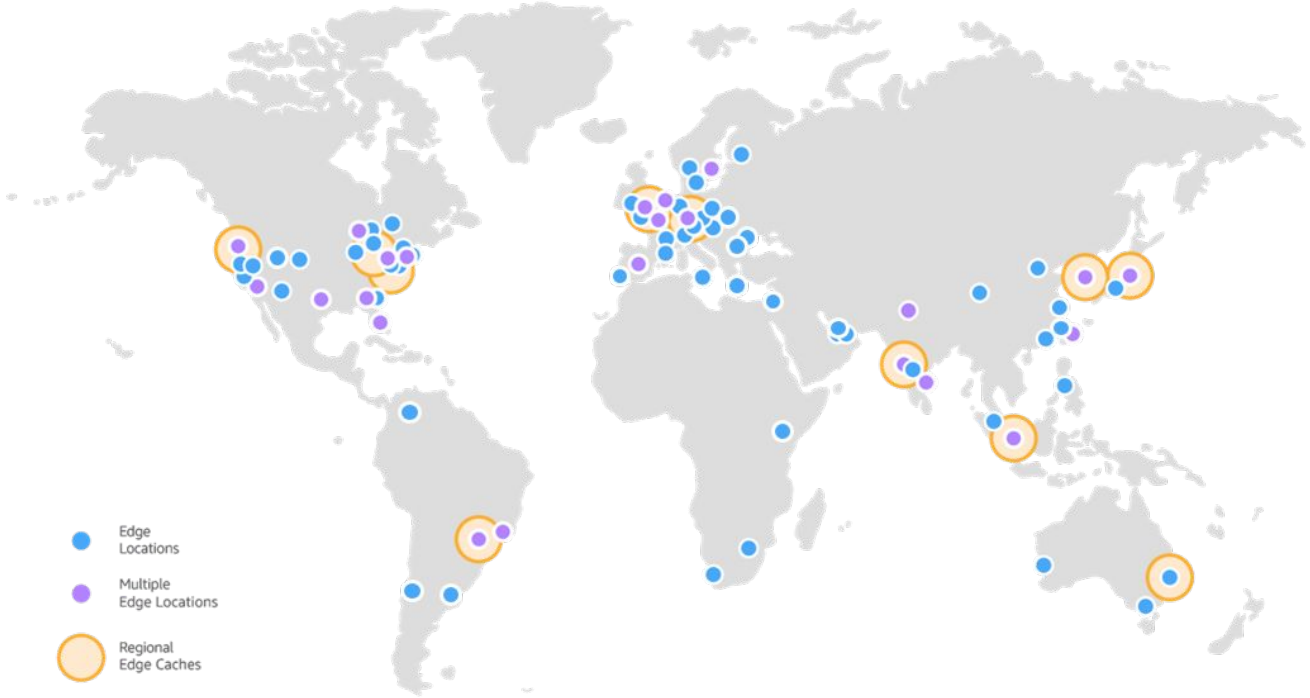
CloudFront

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 400+ 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.

CloudFront

CloudFront Infrastructure



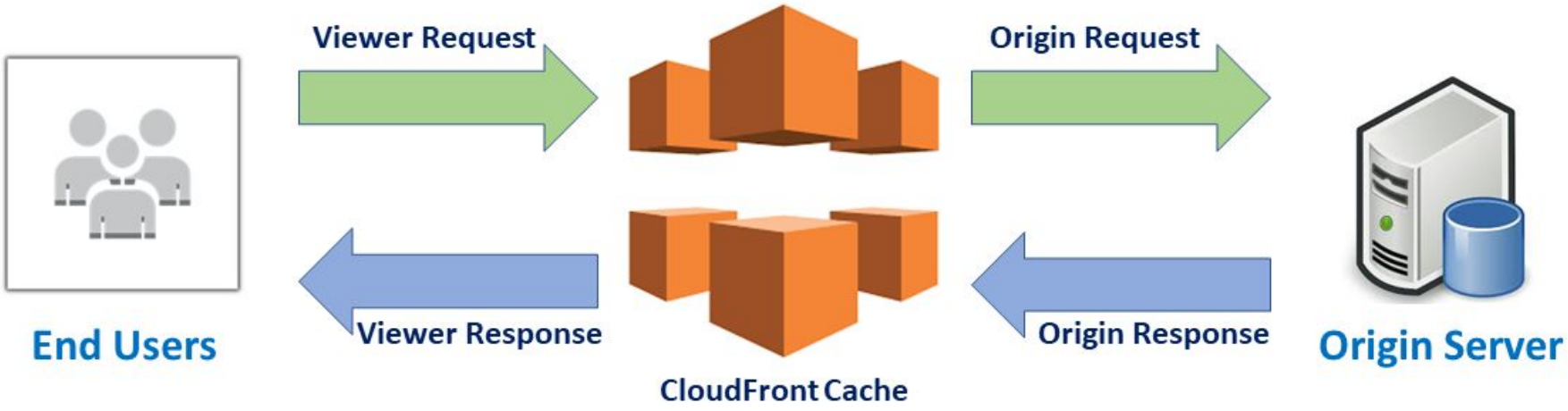
- These facilities are spread over 90+ cities across 47 countries*.

  * November 2020

3 How does CloudFront work?

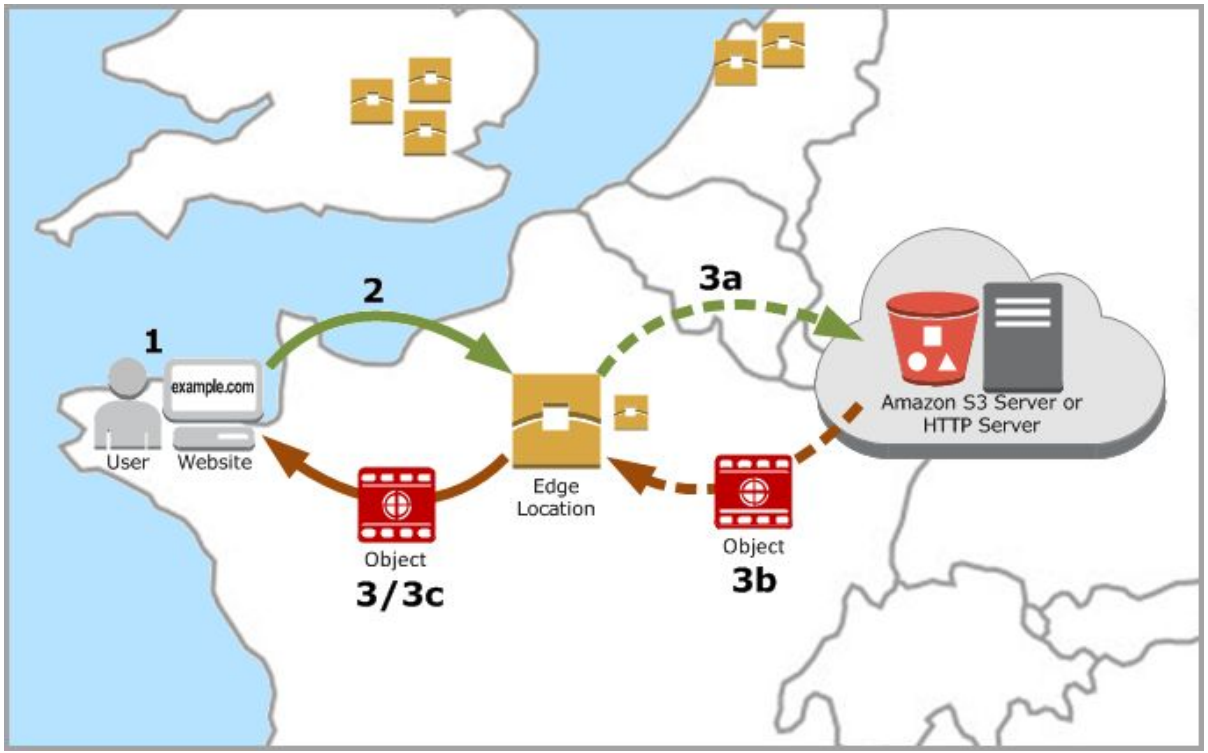
CloudFront

How does it work?



CloudFront

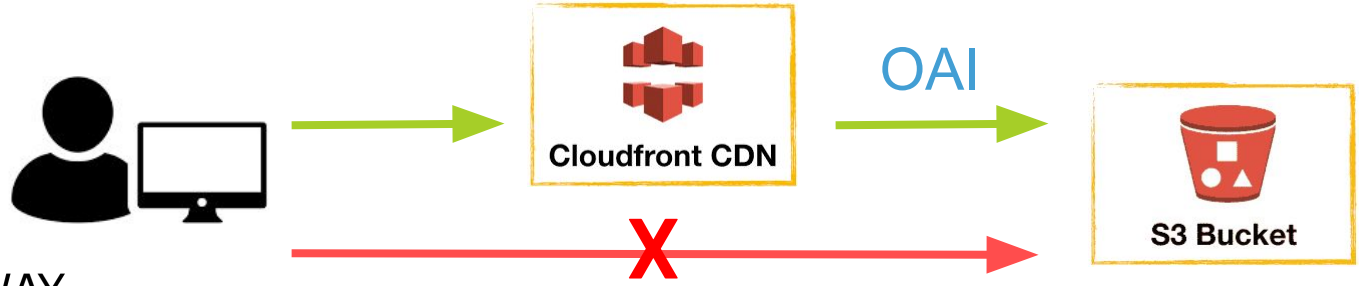
How does it work?



CloudFront

Origins

- AWS Origin
  - Elastic Load Balancer
  - Mediastore Container
  - Media Package Container
  - S3 Bucket (Enables OAI-Origin Access Identity)
- Custom Origin (HTTP)
  - EC2 Instance
  - Any HTTP server
  - S3 Static Website



CloudFront Pricing

CloudFront

Pricing

Free Tier

Always free

1 TB of data transfer out
10,000,000 HTTP or HTTPS Requests
2,000,000 CloudFront Function Invocations

Each month

CloudFront Savings Bundle

Amazon CloudFront charges traffic served based on the following dimensions: The CloudFront Security Savings Bundle is a flexible self-service pricing plan that helps you save up to 30% on your CloudFront bill in exchange for a monthly spend commitment for a one-year term. This savings is not limited to data delivered by CloudFront but applies to all CloudFront usage types, including CloudFront Functions and Lambda@Edge. The CloudFront Security Savings Bundle also includes free AWS Web Application Firewall (WAF) usage up to 10% of your committed amount.

Custom Pricing

Custom Pricing

Custom discounted pricing is available for customers willing to commit to a minimum of 10 TB of data transfer per month for 12 months or longer. Discounts vary based on the amount of the commitment. Interested in signing up for discounted pricing?

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.

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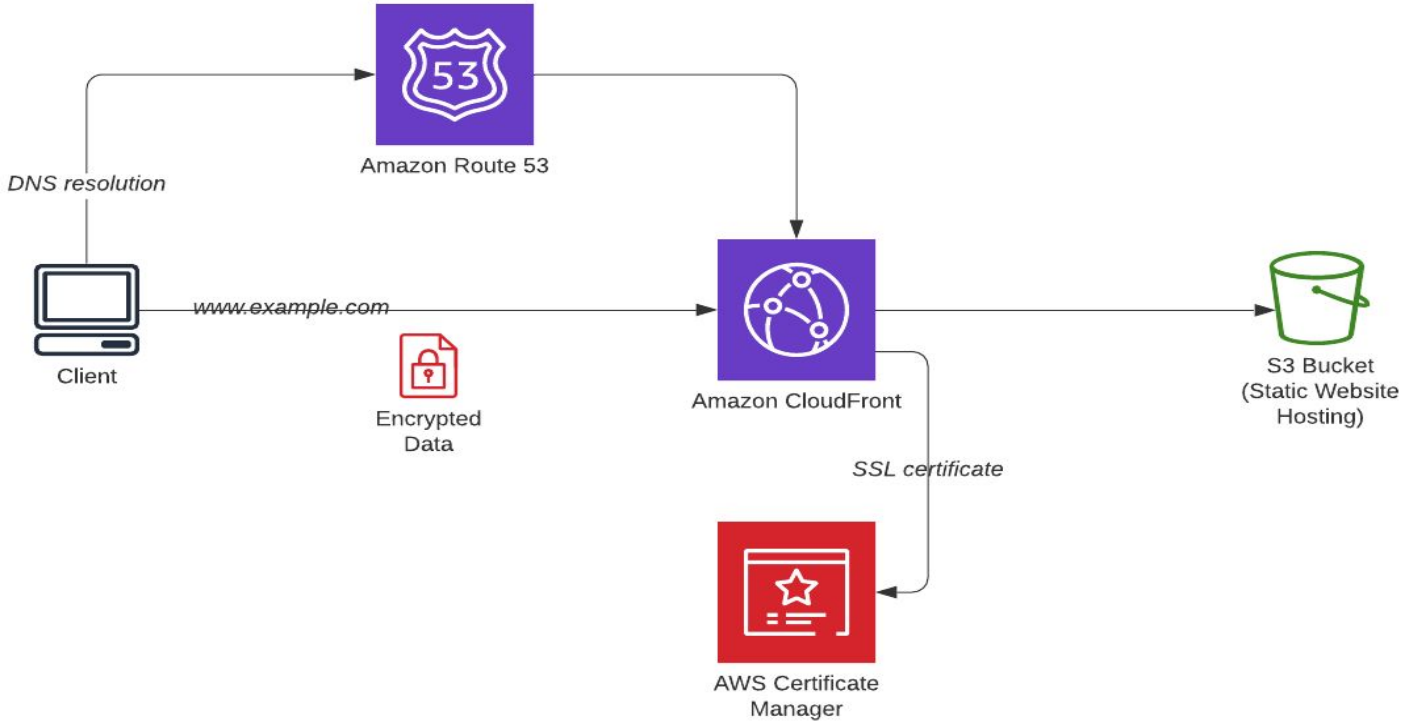
Hands on Scenario



THANKS!

Any questions?

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