AWS CLOUDFRONT

By The Tech Stuff

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01

Introduction

Introduction

Amazon CloudFront is a fast content delivery network (CDN) service offered by AWS. It delivers data, videos, applications, and APIs to customers globally with low latency and high transfer speeds.

02

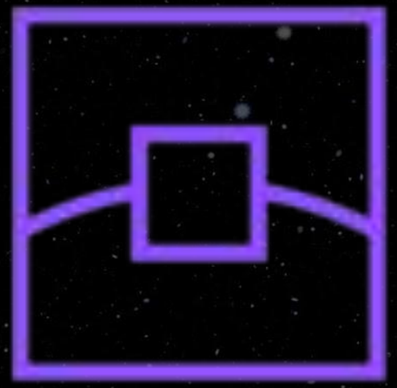
Key Features

KEY FEATURES

1) Global Edge Network

CloudFront operates from a global network of data centers (edge locations).

These edge locations cache copies of your content to ensure it is closer to your end users, reducing latency.



KEY FEATURES

2) Content Caching

CloudFront caches copies of your content at edge locations. When a user requests content, CloudFront checks the edge cache for a copy. If unavailable, it retrieves the content from the origin server, caches it at the edge, and serves it to the user.

KEY FEATURES

3) Origin Servers

CloudFront can pull content from different types of origin servers:

- AWS Services like Amazon S3, Amazon EC2, Elastic Load Balancing.
- Custom origins, such as on-premises servers or any other HTTP server.

KEY FEATURES

4) Security

- AWS Shield: Protects against DDoS attacks.
- AWS Web Application Firewall (WAF): Protects against common web exploits.
- Field-level encryption: Protects sensitive data at the application layer.
- HTTPS: Ensures secure communication with end users.

KEY FEATURES

5) Performance Optimization

- Latency-based routing: Routes requests to the nearest edge location.
- Geo-targeting: Customizes content delivery based on the geographic location of the user.
- Compression: Automatically compresses files to reduce the amount of data that needs to be transferred.

KEY FEATURES

6) Lambda@Edge

Runs code closer to users by leveraging AWS Lambda functions at AWS edge locations, enabling real-time and low-latency processing of requests.

03

How it Works

How it Works

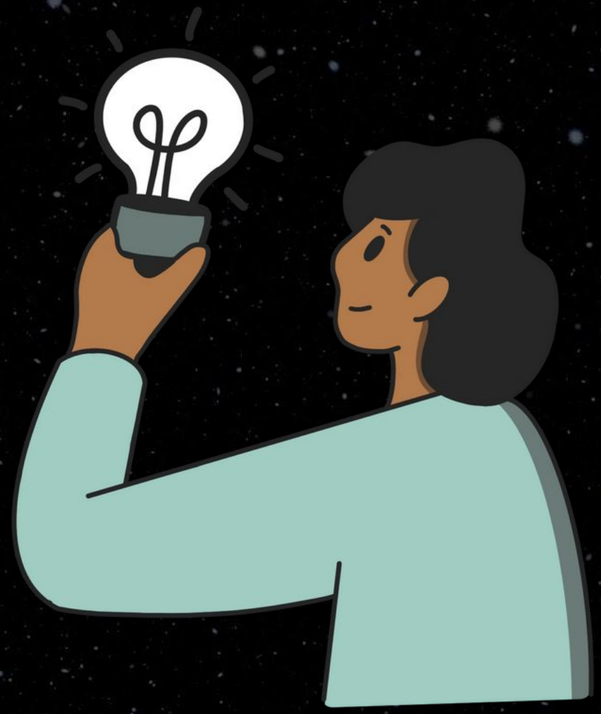
Set up an origin server

Create a CloudFront Distribution

Configure Cache Behavior

Deliver Content

Monitor and Optimize



04

Benefits

Benefits

01)

Performance

Global edge network ensures fast delivery of content to end users.

02)

Scalability

Automatically scales to handle sudden traffic spikes.

Benefits

03)

Security

Multiple security layers protect content from common threats and attacks.

04)

Integration

Seamless integration with other AWS services, simplifying the deployment and management process.

05

Use Cases

USE CASES

Website Acceleration

Deliver both static and dynamic content with low latency and high transfer speeds.

Live Video Streaming

Use CloudFront for live event streaming and on-demand video content.

USE CASES

Security & DDoS Protection

Secure content with encryption, WAF, and DDoS protection.

APIs & Applications

Accelerate API responses and dynamic content delivery for web applications.

06

Pricing

• Cost Management

- Pay-as-you-go: Pay only for the data transfer and requests used to deliver content to end users.
- Free Tier: Includes 1 TB of data transfer out, 10 million HTTP and HTTPS requests each month for free for the first year.

THANK YOU

Any Qyestions?