PaaS- Production Environment

CloudFront

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Agenda

01 What is AWS

02 Need For AWS CloudFront

03 What Is AWS CloudFront?

04 How Is Content Delivered?

05 Applications

06 Demo: AWS CloudFront

amazon
cloudfront
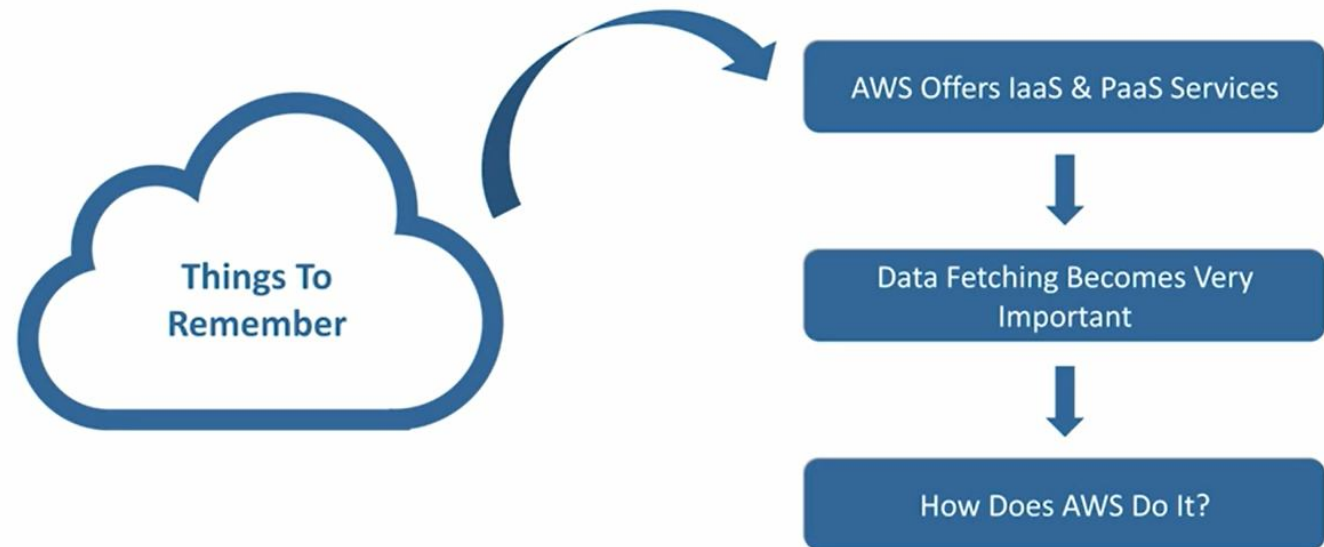
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What Is AWS?

Amazon Web Services (AWS) is a secure cloud services platform, offering compute power, database storage, content delivery and other functionality to help businesses scale and grow.

What Is AWS?

Things To Remember

AWS Offers IaaS & PaaS Services

↓

Data Fetching Becomes Very Important

↓

How Does AWS Do It?

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Need For AWS CloudFront

Scenario 1- Cloud Data Transmission

Scenario 2- CloudFront Transmission

What Is AWS CloudFront?

Amazon CloudFront is a web service that *speeds up distribution* of your static and dynamic web content, such as .html, .css, .js, and image files, to your users.

Key Notations:

Routing

Edge Locations

More Availability

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How AWS CloudFront Delivers Content?

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Applications/Benefits

Accelerate Static Website Content Delivery

Serve On-Demand or Live Streaming Video

Encrypt Specific Fields Throughout System Processing

Customize at the Edge

Serve Private Content by using Lambda@Edge Customizations

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Steps

- Create a S3 bucket with restricting public access with standard bucket policy

- Upload one (each) image, video and html file with read and write permission for owner

- Go to CloudFront from Network & Content Delivery
  - Create Distribution
    - **Step 1: Select delivery method**
      - o **Choose web [For static content display]**
      - o Choose RTMP [For streaming live media]
        - Real-Time Messaging Protocol (**RTMP**)
    - **Step 2: Create distribution**

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Settings Page1

Create Distribution

Origin Settings

Origin Domain Name	cloudfronttoday.s3.amazonaws.com	ℹ
Origin Path		ℹ
Origin ID	S3-cloudfronttoday	ℹ
Restrict Bucket Access	⦿ Yes ○ No	ℹ
Origin Access Identity	⦿ Create a New Identity ○ Use an Existing Identity	ℹ
Comment	access-identity-cloudfronttoday.s3.amazonaws.com	ℹ
Grant Read Permissions on Bucket	⦿ Yes, Update Bucket Policy ○ No, I Will Update Permissions	ℹ
Origin Custom Headers	Header Name	Value

After (-)type Origin Domain Name

10

Settings Page2

Default Cache Behavior Settings

Path Pattern	Default (*)
Viewer Protocol Policy	○ HTTP and HTTPS ◉ Redirect HTTP to HTTPS ○ HTTPS Only
Allowed HTTP Methods	◉ GET, HEAD ○ GET, HEAD, OPTIONS ○ GET, HEAD, OPTIONS, PUT, POST, PATCH, DELETE
Field-level Encryption Config	[⌄]
Cached HTTP Methods	GET, HEAD (Cached by default)
Cache Based on Selected Request Headers	None (Improves Caching) ⌄ Learn More
Object Caching	◉ Use Origin Cache Headers ○ Customize Learn More

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Settings Page3

Minimum TTL: 0

Maximum TTL: 31536000

Default TTL: 86400

Forward Cookies: None (Improves Caching)

Query String Forwarding and Caching: None (Improves Caching)

Smooth Streaming: ○ Yes ● No

Restrict Viewer Access (Use Signed URLs or Signed Cookies): ○ Yes ● No

Compress Objects Automatically: ○ Yes ● No

Learn More

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Settings Page4

Lambda Function Associations   ❶

CloudFront Event	Lambda Function ARN	Include Body
Select Event Type ⌄		☐ ➕

Learn More

Distribution Settings

Price Class   Use All Edge Locations (Best Performance) ⌄   ❶

AWS WAF Web ACL   None ⌄   ❶

Alternate Domain Names (CNAMEs)   [   ]   ❶

SSL Certificate   ⦿ Default CloudFront Certificate (*.cloudfront.net)

Choose this option if you want your users to use HTTPS or HTTP to access your content with the CloudFront domain name (suc
https://d111111abcdef8.cloudfront.net/logo.jpg).
Important: If you choose this option, CloudFront requires that browsers or devices support TLSv1 or later to access your content

○ Custom SSL Certificate (example.com):

Choose this option if you want your users to access your content by using an alternate domain name, such as https://www.exam
You can use a certificate stored in AWS Certificate Manager (ACM) in the US East
(N. Virginia) Region, or you can use a certificate stored in IAM.

Settings Page5

Supported HTTP Versions	● HTTP/2, HTTP/1.1, HTTP/1.0 ❶
	○ HTTP/1.1, HTTP/1.0
Default Root Object	[_____] ❶
Logging	○ On ❶
	● Off
Bucket for Logs	[_____] ❶
Log Prefix	[_____] ❶
Cookie Logging	○ On ❶
	● Off
Enable IPv6	☑ ❶
	Learn more
Comment	[_____] ❶
Distribution State	● Enabled ❶
	○ Disabled

Cancel   Back   **Create Distribution**

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Output Link

- Click on Distribution [Top Left Corner]
  - Waiting Time [5 to 10 Minutes]
  - Click on DNS/filename

References

- https://www.youtube.com/watch?v=sQNONcj0cvc
- https://www.youtube.com/watch?v=AT-nHW3_SVI
- https://www.youtube.com/watch?v=KIItfPRpTi4
- https://www.youtube.com/watch?v=Ideptk0sJcM

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